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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

To: Interested Parties

Date: June 28, 2024

From: Jenny Acker, Chief
Permits Branch
Office of Air Quality

Source Name: Sonoco Flexible Packaging Incorporated

Permit Level: TV Renewal

Permit Number: 081-47176-00005

Source Location: 6502 S US Hwy 31 Edinburg, IN 46124

Type of Action Taken: Permit Renewal

Notice of Decision: Approval - Effective Immediately

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

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, choose Search Option **by Permit Number**, then enter permit 47176. This search will also provide the application received date, **draft permit** public notice start and end date, **proposed permit** EPA review period start and end date, and **final** permit issuance date.

The final decision is also available via IDEM's Virtual File Cabinet (VFC). Please go to: https://www.in.gov/idem and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

If you would like to request a paper copy of the permit document, please contact IDEM's Office of Records Management:

IDEM - Office of Records Management
Indiana Government Center North, Room 1207
100 North Senate Avenue
Indianapolis, IN 46204
Phone: (317) 232-8667
Fax: (317) 233-6647
Email: IDEMFILEROOM@idem.in.gov

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

If you wish to challenge this decision, IC 4-21.5-3-7 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 Indiana Office of Administrative Law Proceedings, 100 N. Senate Avenue Suite N802, 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 Indiana Office of Administrative Law Proceedings (OALP); or
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OALP 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 OALP by private carrier.

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

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

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or permit 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.

The EPA requests that you file title V petitions electronically through the Central Data Exchange. To do so, please go to: https://cdx.epa.gov/ .

If you tried but you are unable to use the Central Data Exchange to file your petition, the EPA requests that you send your petition and associated attachments via email to: titleVpetitions@epa.gov.

If you have made every effort to electronically submit your petition but are simply unable to successfully do so, please submit a hardcopy of your petition to the following address:

US EPA
Office of Air Quality Planning and Standards
Air Quality Policy Division
Operating Permits Group Leader
109 T.W. Alexander Dr. (C-504-01)
Research Triangle Park, NC 27711

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Eric J. Holcomb
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Commissioner

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Sonoco Flexible Packaging, Inc.
6502 South US Highway 31
Edinburgh, Indiana 46124

(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.: T081-47176-00005 Master Agency Interest ID: 11990	
Issued by: for: Ghassan Shalabi, Section Chief Permits Branch Office of Air Quality	Issuance Date: June 28, 2024 Expiration Date: June 28, 2029

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

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

The Permittee owns and operates a stationary commercial printing operation.

Source Address:	6502 South US Highway 31, Edinburgh, Indiana 46124
General Source Phone Number:	(812) 526-5511
SIC Code:	2671
County Location:	Johnson
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD and Emission Offset Rules Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

(a) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 101 (6RL), constructed in 1987, having a maximum line speed of 1000 ft/min and a maximum printing width of 52 inches, using thermal oxidizer 6RL as control, using natural gas, with a heat input rate of 24.0 MMBtu per hour, and exhausting to stack S11. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.

(b) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 103 (8RL), constructed in 1995, having a maximum line speed of 1000 ft/min and a maximum printing width of 51.5 inches, using thermal oxidizer Megtec as control, using natural gas, with a heat input rate of 8.7 MMBtu per hour, and exhausting to stack 13. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.
Under 40 CFR 63, Subpart JJJJ, this unit is considered an affected facility.

(c) One (1) 5X extrusion coater/laminator, identified as EU 201, constructed before 1987, using no control, and exhausting to stack 21. Product being coated is web substrate packaging material, application method used is roll coating, and consisting of the following units:

(1) One (1) extrusion laminator;

(2) One (1) coating/adhesive lamination deck;

(3) One (1) coating deck; and

(4) Two (2) coating station dryers, each rated at 1.5 MMBtu per hour.

Under 40 CFR 63, Subpart JJJJ, these units are considered affected facilities.

(d) One (1) 6X extrusion coater/laminator, identified as EU 204, constructed in 1996, using 6X thermal oxidizer as control, using natural gas, with a heat input rate of 4.7 MMBtu per hour, and exhausting to stack 15. Product being coated is web substrate packaging material, application method used is roll coating, and consisting of the following units:

(1) Two (2) extrusion laminators;

(2) Two (2) coating/adhesive lamination stations, identified as No. 1 and No. 2, each utilizing a gravure cylinder application system, each with a permanent total enclosure capture system, each coating a maximum of 43.2 million (MM) square inches per hour; and

(3) Two (2) coating/adhesive lamination station dryers, each rated at 1.5 MMBtu per hour.

Under 40 CFR 63, Subpart JJJJ, these units are considered affected facilities.

(e) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 104 (R17), constructed in 2022, having a maximum line speed of 1312 ft/min and a maximum printing width of 52 inches, using thermal oxidizer Megtec as control, with a heat input rate of 8.7 MMBtu per hour, and exhausting to stack S13. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.

(f) One (1) 25L laminator, identified as EU 205, approved in 2022 for construction, using Megtec thermal oxidizer as control when using solvent borne coatings, with a heat input rate of 8.7 MMBtu per hour, and exhausting to stack S13. When coating using water-based coatings, the thermal oxidizer will not be operated, and emissions will be exhausted through stack 14. Product being coated is web substrate packaging material, application method used is roll coating, and consisting of the following units:

(1) Two (2) extrusion laminators;

(2) Two (2) coating/adhesive lamination stations, identified as No. 1 and No. 2, each utilizing a gravure cylinder application system, each with a permanent enclosure capture system, each coating a maximum of 43.1 million (MM) square inches per hour; and

(3) One (1) 8.0 MMBtu/hr hot oil system.

Under 40 CFR 63, Subpart JJJJ, these units are considered affected facilities.

(g) One (1) cold cleaner degreasing unit, identified as EU 102, constructed in 1987 and approved in 2019 for modification, using a distillation unit and the 6X thermal oxidizer as control, and exhausting to stack 15.

(h) One (1) cold cleaner degreasing unit, identified as EU 105, constructed in 1995, using a distillation unit and the 6X thermal oxidizer as control, and exhausting to stack 15.

(i) One (1) natural gas boiler, identified as Boiler EU 11 (No. 1), constructed in 1997, with a heat input capacity of 20.925 MMBtu per hour, and exhausting to stack 01.

Under 40 CFR 60, Subpart Dc, this unit is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this unit is considered an affected facility.

(j) One (1) natural gas boiler, identified as Boiler EU 12 (No. 2), constructed in 1998, with a heat input capacity of 20.925 MMBtu per hour, and exhausting to stack 02.

Under 40 CFR 60, Subpart Dc, this unit is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this unit is considered an affected facility.

(k) One (1) 11-head inkjet printer, identified as Inkjet Printer to print promotional codes, permitted in 2021, with a maximum of ink material usage of 0.94 liters per day per head, using no control, and exhausting indoors.

(l) One (1) 2-head inkjet printer, identified as QR Printer to print QR codes, permitted in 2021, with a maximum of ink material usage of 2.64 liters per day per head, using no control, and exhausting indoors.

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

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

(a) One (1) natural gas heater for 5X extrusion coater/laminator, constructed before 1987, with a heat input capacity of 1.60 MMBtu per hour, and exhausting to stack 21.

(b) One (1) natural gas heater for 6X extrusion coater/laminator, constructed in 1996, with a heat input capacity of 1.60 MMBtu per hour, and exhausting to stack 13.

(c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: cutting torches, soldering equipment, and welding equipment.

(d) Closed loop heating and cooling systems.

(e) Heat exchanger cleaning and repair.

(f) Enclosed systems for conveying plastic raw materials and plastic finished goods.

(g) Blowdown for the following: boilers and compressors.

(h) Activities with potential uncontrolled emissions equal to or less than the thresholds below:

CO ≤ 25 lb/day	Pb ≤ 0.6 tpy or 3.29 lb/day	NO_X ≤ 5 lb/hr or 25 lb/day
PM10 ≤ 5 lb/hr or 25 lb/day	SO2 ≤ 5 lb/hr or 25 lb/day	VOC ≤ 3 lb/hr or 15 lb/day

(1) One (1) N-propyl alcohol storage tank;

(2) One (1) ethyl alcohol storage tank;

(3) One (1) N-propyl acetate storage tank;

(4) One (1) ethyl acetate storage tank; and

(5) One (1) 50% N-Propyl Acetate/50% N-Propyl Alcohol storage tank.

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, T081-47176-00005, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

and

United States Environmental Protection Agency, Region 5
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to T081-47176-00005 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

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

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

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

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

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

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

(1) That this permit contains a material mistake.

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

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

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

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

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

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

Request for renewal shall be submitted to:

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

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

(1) Submitted at least 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] [40 CFR 72]

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

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

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

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

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

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

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

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

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

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

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

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

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

(4) The Permittee notifies the:

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

and

United States Environmental Protection Agency, Region 5
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

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

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

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

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

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

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

(3) Any change in emissions; and

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-8590 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

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

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

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

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

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

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

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

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

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

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

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

C.9 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64][326 IAC 3-8]

(a) For new units:
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

C.12 Risk Management Plan [326 IAC 2-7-5(11)] [40 CFR 68]

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

C.13 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

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

(II)

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

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

operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

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

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

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

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

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

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

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

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

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

(h) *CAM recordkeeping requirements.*
(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality

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

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

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

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

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

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

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

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

C.15 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(b)(2), starting in 2005 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(33) (“Regulated pollutant, which is used only for purposes of Section 19 of this rule”) from the source, for purpose of fee assessment.

The statement must be submitted to:

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

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

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

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

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

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

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

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

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

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [40 CFR 64][326 IAC 3-8]

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

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

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

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

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

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

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

(b) The address for report submittal is:

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

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

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

Stratospheric Ozone Protection

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

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 101 (6RL), constructed in 1987, having a maximum line speed of 1000 ft/min and a maximum printing width of 52 inches, using thermal oxidizer 6RL as control, using natural gas, with a heat input rate of 24.0 MMBtu/hr, and exhausting to stack S11. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.

(b) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 103 (8RL), constructed in 1995, having a maximum line speed of 1000 ft/min and a maximum printing width of 51.5 inches, using thermal oxidizer Megtec as control, using natural gas, with a heat input rate of 8.7 MMBtu/hr, and exhausting to stack 13. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.
Under 40 CFR 63, Subpart JJJJ, this unit is considered an affected facility.

(c) One (1) 5X extrusion coater/laminator, identified as EU 201, constructed before 1987, using no control, and exhausting to stack 21. Product being coated is web substrate packaging material, application method used is roll coating, and consisting of the following units:

(1) One (1) extrusion laminator;

(2) One (1) coating/adhesive lamination deck;

(3) One (1) coating deck; and

(4) Two (2) coating station dryers.

Under 40 CFR 63, Subpart JJJJ, these units are considered affected facilities.

(d) One (1) 6X extrusion coater/laminator, identified as EU 204, constructed in 1996, using 6X thermal oxidizer as control, using natural gas, with a heat input rate of 4.7 MMBtu/hr, and exhausting to stack 15. Product being coated is web substrate packaging material, application method used is roll coating, and consisting of the following units:

(1) Two (2) extrusion laminators;

(2) Two (2) coating/adhesive lamination stations, identified as No. 1 and No. 2, each utilizing a gravure cylinder application system, each with a permanent total enclosure capture system, each coating a maximum of 43.2 million (MM) square inches per hour; and

(3) Two (2) coating/adhesive lamination station dryers, each rated at 1.5 MMBtu/hr.

Under 40 CFR 63, Subpart JJJJ, these units are considered affected facilities.

(e) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 104 (R17), constructed in 2022, having a maximum line speed of 1312 ft/min and a maximum printing width of 52 inches, using thermal oxidizer Megtec as control, with a heat input rate of 8.7 MMBtu/hr, and exhausting to stack S13. Equipped with adhesive applicator and enclosed in a permanent total enclosure

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.

(f) One (1) 25L laminator, identified as EU 205, approved in 2022 for construction, using Megtec thermal oxidizer as control when using solvent borne coatings, with a heat input rate of 8.7 MMBtu/hr, and exhausting to stack S13. When coating using water-based coatings, the thermal oxidizer will not be operated, and emissions will be exhausted through stack 14. Product being coated is web substrate packaging material, application method used is roll coating, and consisting of the following units:

(1) Two (2) extrusion laminators;

(2) Two (2) coating/adhesive lamination stations, identified as No. 1 and No. 2, each utilizing a gravure cylinder application system, each with a permanent enclosure capture system, each coating a maximum of 43.1 million (MM) square inches per hour; and

(3) One (1) 8.0 MMBtu/hr hot oil system.

Under 40 CFR 63, Subpart JJJJ, these units are considered affected facilities.

(g) One (1) cold cleaner degreasing unit, identified as EU 102, constructed in 1987 and approved in 2019 for modification, using a distillation unit and the 6X thermal oxidizer as control, and exhausting to stack 15.

(h) One (1) cold cleaner degreasing unit, identified as EU 105, constructed in 1995, using a distillation unit and the 6X thermal oxidizer as control, and exhausting to stack 15.

(k) One (1) 11-head inkjet printer, identified as Inkjet Printer to print promotional codes, permitted in 2021, with a maximum of ink material usage of 0.94 liters per day per head, using no control, and exhausting indoors.

(l) One (1) 2-head inkjet printer, identified as QR Printer to print QR codes, permitted in 2021, with a maximum of ink material usage of 2.64 liters per day per head, using no control, and exhausting indoors.

(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 Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the total VOC emissions from rotogravure printing presses EU 101 (6RL), EU 103 (8RL), EU 104 (R17), 5X extrusion coater/laminator EU 201, 6X extrusion coater/laminator EU 204, 25L laminator EU 205, cold cleaner degreasing units EU 102 and EU 105, Inkjet Printer and QR Printer shall not exceed 246.3 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

D.1.2 PSD BACT [326 IAC 2-2-3]

(a) Pursuant to 326 IAC 2-2-3 (PSD BACT), and PSD CP (41) 1704, issued on September 22, 1988, and revised by SSM 081-23492-00005, issued on August 28, 2007:

(1) The VOC emissions from rotogravure printing press EU 101 (6RL) shall be controlled by a combination of a permanent total enclosure, with a capture efficiency of 100%, and a thermal oxidizer.

(2) The overall VOC control efficiency for the thermal oxidizer controlling the emissions from rotogravure printing press EU 101 (6RL) (including the capture efficiency and destruction efficiency) shall be at least 97.5%.

(3) The total amount of VOC delivered to rotogravure printing press EU 101 (6RL) shall be limited to less than 6,738 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) Pursuant to 326 IAC 2-2-3 (PSD BACT), PSD CP (41) 1704, issued on September 22, 1988, and revised by SSM 081-41457-00005 issued on July 11, 2019:

(1) The VOC emissions from the EU 102 cold cleaner degreasing unit shall be controlled by an RTO.

(2) The overall control efficiency, including the capture and destruction efficiency, shall be at least 98%.

(3) The VOC input to the EU 102 cold cleaner degreasing unit shall not exceed 16.43 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

D.1.3 VOC Emissions Limitations [326 IAC 8-2-5]

(a) The VOC input to the 5X extrusion coater/laminator EU 201 shall be less than twenty-five (25) tons per twelve (12) consecutive month period, with compliance determined at the end of each month. This usage limit is required to limit the potential to emit of VOC to less than 25 tons per year. Compliance with this limit makes the requirement of 326 IAC 8-2-5 (Paper Coating Operations) not applicable to the 5X extrusion coater/laminator EU 201.

(b) Pursuant to 326 IAC 8-2-5(b), the Permittee shall not cause, allow, or permit the discharge into the atmosphere any volatile organic compounds (VOC) in excess of 2.9 pounds VOC per gallon of coating excluding water, as delivered to the coating applicator for each of the 6X extrusion coater/laminator EU 204 and 25L laminator EU 205.

D.1.4 Volatile Organic Compounds (VOC) Emissions Limitations for Graphic Arts Operations [326 IAC 8-5-5]

(a) Pursuant to 326 IAC 8-5-5(c)(3)(B), the 6RL and Megtec thermal oxidizers shall maintain at least a 90% destruction efficiency.

(b) Pursuant to 326 IAC 8-5-5(e)(2)(C), the combination of the capture system and emission control device for the rotogravure presses EU 103 (8RL) and EU 104 (R17), shall maintain an overall control efficiency of 75%.

(c) Pursuant to 326 IAC 8-5-5(f), work practices shall be used to minimize VOC emissions from cleaning operations. Work practices shall include, but not be limited to, the following:

(1) When not in use, all cleaning materials shall be kept in closed containers.

(2) Cleaning materials shall be conveyed from one (1) location to another in closed containers or pipes.

D.1.5 Organic Solvent Degreasing Operations: Cold Cleaner Operations [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements), the Permittee shall:

(a) Comply with the following control equipment and operating requirements:

(1) Equip the degreaser with a cover.

(2) Equip the degreaser with a device for draining cleaned parts.

(3) Close the degreaser cover whenever parts are not being handled in the degreaser.

(4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases.

(5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).

(6) Store waste solvent only in closed containers.

(7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

(b) Comply with the following additional control equipment and operating requirements:

(1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):

(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) A refrigerated chiller.
(D) Carbon adsorption.
(E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.

(2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.

(3) If used, solvent spray:

(A) performed in an enclosed chamber, with or without venting; or
(B) a solid, fluid stream applied at a pressure that does not cause excessive splashing.

D.1.6 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), the Permittee shall not operate a cold cleaning degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

D.1.7 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.1.8 VOC [326 IAC 8-5-5(c)(3)][326 IAC 2-2]

Pursuant to 326 IAC 8-5-5(c)(3) and in order to assure compliance with Conditions D.1.1, D.1.2, D.1.4(a), and D.1.4(b):

(a) The 6RL thermal oxidizer for VOC control shall be in operation and control emissions from the rotogravure printing presses, identified as EU 101 (6RL) at all times the associated facilities are in operation.

(b) The Megtec thermal oxidizer for VOC control shall be in operation and control emissions from the rotogravure printing presses, identified as EU 103 (8RL), EU 104 (R17) and the 25L laminator EU 205 at all times the associated facilities are in operation.

(c) The 6X thermal oxidizer for VOC control shall be in operation and control emissions from the 6X extrusion coater/laminator EU 204, and the cold cleaner degreasing units EU102 and EU105 at all times the associated facilities are in operation.

D.1.9 VOC Control [326 IAC 8-1-2(a)]

(a) Pursuant to 326 IAC 8-1-2(a) and in order to assure compliance with Condition D.1.3(b), the Permittee shall operate the 6X thermal oxidizer for VOC control at all times the 6X extrusion coater/laminator (EU 204) is in operation, except when using 326 IAC 8-2-5 compliant coatings.

(b) Pursuant to 326 IAC 8-1-2(a) and in order to assure compliance with Condition D.1.3(b), the Permittee shall operate the Megtec thermal oxidizer for VOC control at all times the 25L laminator (EU 205) is in operation, except when using 326 IAC 8-2-5 compliant coatings.

D.1.10 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.1.1, D.1.2, and D.1.4(a), the Permittee shall perform VOC capture and destruction efficiency testing of 6RL thermal oxidizer controlling the rotogravure printing press EU 101 (6RL), utilizing methods as approved by the Commissioner at least once every 2.5 years from the date of the most recent valid compliance demonstration.

(b) In order to demonstrate compliance with Conditions D.1.1, D.1.2, D.1.4(a), and D.1.4(b), not later than 180 days after startup of EU 104 (R17), the Permittee shall perform VOC capture and destruction efficiency testing of the Megtec thermal oxidizer controlling rotogravure printing press EU 103 (8RL), EU 104 (R17) and the 25L laminator EU 205, utilizing methods approved by the commissioner at least once every 2.5 years from the date of the most recent valid compliance demonstration.

(c) In order to demonstrate compliance with Conditions D.1.1 and D.1.2, not later than 180 days after the startup of 6X thermal oxidizer, the Permittee shall perform VOC capture and destruction efficiency testing of the 6X thermal oxidizer controlling the 6X extrusion coater/laminator EU 204 and the cold cleaner degreasing units EU 102 and EU 105, utilizing methods approved by the commissioner at least once every 2.5 years from the date of the most recent valid compliance demonstration.

(d) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.1.11 VOC Emissions

In order to demonstrate compliance with Condition D.1.1, the Permittee shall use the following equation to determine the tons of total VOCs emitted per month.

Total VOC emissions per month =

(VOC input to 6RL printing press) * (1 - CE_{6RL}) +
(VOC input to 8RL printing press + VOC input to R17 printing press + solvent borne VOC input to 25L Laminator) * (1-CE_{Megtec}) + Water-borne VOC input to 25L Laminator + VOC input to 6X Coat/Laminator) * (1 - CE_{6X}) +
(VOC input to 5X Coat/Laminator) +
(VOC input to degreasing units EU 102 and EU 105) * (1 - $CE_{6X,}$) + (VOC Input to Inklet Printer) +
(VOC input to QR Printer)
(Cleanup solvents)

Where:

CE_{6RL} = Overall VOC control efficiency of Thermal Oxidizer 6RL from the most recent valid stack test

CE_{Megtec} = Overall VOC control efficiency of Thermal Oxidizer Megtec from the most recent valid stack test

CE_{6X} = Overall VOC control efficiency of Thermal Oxidizer 6X from the most recent valid stack test

D.1.12 Volatile Organic Compounds (VOC) [326 IAC 8-1-2][326 IAC 8-1-4]

Compliance with the VOC limitations contained in Conditions D.1.1, D.1.2, and D.1.3 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.1.13 Volatile Organic Compounds (VOC) Content Limitations [326 IAC 8-1-2]

When using non-compliant coatings, the Permittee shall comply with the following:

(a) Pursuant to 326 IAC 8-1-2 (b), the VOC emissions from the 6X extrusion coater/laminator (EU 204) and 25L laminator (EU 205) shall be limited to no greater than the equivalent emissions (E), expressed as pounds of VOC per gallon of coating solids, allowed in Condition D.1.3(b).

This equivalency was determined by the following equation:

$E = L / (1 - (L/D))$

Where:

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating;
D= Density of VOC in coating in pounds per gallon of VOC;
E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

A solvent density of 7.36 pounds of VOC per gallon of coating shall be used to determine equivalent pounds of VOC per gallon of solids for the applicable emission limit contained in this article.

Actual solvent density shall be used to determine compliance using the compliance methods in 326 IAC 8-1-2 (a).

(b) The pounds of VOC per gallon of coating solids shall be limited to less than 4.75 pounds per gallon of solid.

(c) Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the 6X thermal oxidizer and the Megtec thermal oxidizer shall be no less than the equivalent overall efficiency calculated by the following equation:

$$O = \frac{(V - E)}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied
E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied
O = Equivalent overall efficiency of the capture system and control device as a percentage

The overall efficiency of the 6X thermal oxidizer shall be greater than 80.2%.

The overall efficiency of the Megtec thermal oxidizer shall be greater than 49.63%.

D.1.14 Compliance Certification, Record Keeping and Reporting Requirements for Certain Coating Facilities Using Control Devices [326 IAC 8-1-9][326 IAC 8-1-12]

(a) Pursuant to 326 IAC 8-1-9:

(1) For the purpose of records required under 326 IAC 8-1-12(c), the applicable test methods and procedures specified in 326 IAC 8-1-4 of this rule shall be used to determine the following:

(A) The volatile organic compound (VOC) content of each coating, as applied.

(B) The efficiency of the capture system and control device.

(2) Records required by this rule or records used to demonstrate that a source is exempt from the requirements of this article shall be submitted to the IDEM, OAQ within thirty (30) days of the receipt of a written request.

(3) All records required by this rule or records necessary to determine compliance with 326 IAC 8-5-5 shall be accessible on-site for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

(b) Pursuant to 326 IAC 8-1-12, for facilities using control devices to comply with 326 IAC 8-5-5, the Permittee shall comply with the following requirements:

(1) Control system operation, maintenance, and testing requirements shall be as follows:

(A) The control system shall be operated and maintained according to the manufacturer's recommendations but may be modified based on the results of the initial or subsequent compliance test or upon the written request of IDEM, OAQ.

(B) A copy of the operating and maintenance procedures shall be maintained in a convenient location at the source property and as close to the control system as possible for reference by plant personnel and IDEM, OAQ inspectors.

(C) The control system shall be tested according to the following schedule and in the following situations:

(i) An initial compliance test shall be conducted. Compliance tests shall be conducted no later than every thirty (30) months after the date of the initial test.

(ii) A compliance test shall be conducted whenever the owner or operator chooses to operate a control system under conditions different from those that were in place at the time of the previous test.

(iii) A compliance test shall be performed within ninety (90) days of:

(AA) startup of a new coating facility;

(BB) changing the method of compliance for an existing coating facility from compliant coatings or daily weighted averaging to control devices; or

(CC) receipt of a written request from the IDEM, OAQ.

(D) All compliance tests shall be conducted according to a protocol approved by the IDEM, OAQ at least thirty (30) days before the test. The protocol shall contain, at a minimum, the following information:

(i) Test procedures.

(ii) Operating and control system parameters.

(iii) Type of VOC containing process material being used.

(iv) The process and control system parameters that will be monitored during the test.

(2) Monitoring equipment requirements shall be as follows. If a thermal incinerator is used for VOC reduction, a temperature monitoring device capable of continuously recording the temperature of the gas stream in the combustion zone of the incinerator shall be used. The temperature monitoring device shall have an accuracy of one percent (1%) of the temperature being measured in degrees Centigrade, or plus or minus five-tenths degree Centigrade (± 0.5°C), whichever is more accurate.

(c) Pursuant to 326 IAC 8-1-12, the Permittee shall collect and record each day and maintain all of the following information each day for each coating facility:

(1) The name and identification number of each coating used at each coating facility.

(2) The weight of VOC of each coating used each day at each coating facility.

(3) The required overall emission reduction efficiency for each day for each coating facility.

(4) The actual overall emission reduction efficiency achieved for each day for each coating facility as determined during the compliance test required by 326 IAC 8-1-12(b)(1)(C).

(5) Control device monitoring data for thermal incinerators as follows:

(A) Continuous records of the temperature in the gas stream in the combustion zone of the incinerator.

(B) Records of all three (3) hour periods of operation in which the average combustion temperature of the gas stream in the combustion zone was more than fifty degrees Fahrenheit (50°F) (twenty-eight degrees Centigrade (28°C)) below the average combustion temperature that existed during the most recent test that demonstrated that the coating facility was in compliance.

(6) A log of operating time for the capture system, control device, monitoring equipment, and the associated coating facility.

(d) Pursuant to 326 IAC 8-1-12, the Permittee shall collect, record, and maintain for each coating facility a maintenance log for the capture system, control device, and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.

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

D.1.15 Thermal Oxidizer Temperature

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the 6RL thermal oxidizer, Megtec thermal oxidizer and 6X thermal oxidizer for measuring operating temperature. For the purpose of this condition, continuous means no less often than once per fifteen (15) minutes. The output of this system shall be recorded as 3-hour average.

(b) The Permittee shall determine the 3-hour average temperature from the latest valid stack test that demonstrates compliance with limits in Conditions D.1.1, D.1.2, D.1.3, and D.1.4.

(c) On and after the date the stack test results are available, the Permittee shall operate the thermal oxidizers at or above the 3-hour average temperature as observed during the latest compliant stack tests.

(d) If the 3-hour average temperature falls below the above mentioned 3-hour average temperature, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A 3-hour average temperature reading below the above mentioned 3-hour average temperature is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.1.16 Thermal Oxidizer Duct Pressure or Fan Amperage

(a) The Permittee shall determine the appropriate duct pressure or fan amperage from the latest valid stack test that demonstrates compliance with limits in Conditions D.1.1, D.1.2, D.1.3, and D.1.4.

(b) The duct pressure or fan amperage shall be observed at least once per day when the 6RL thermal oxidizer, Megtec thermal oxidizer and/or 6X thermal oxidizer are in operation. On and after the date the stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in latest valid stack tests.

(c) When, for any one reading, the duct pressure or fan amperage is outside the above mentioned range, the Permittee shall take a reasonable response. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A 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.

(d) The instruments used for determining the pressure drop shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months or as per manufacturer's recommendation.

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

D.1.17 Record Keeping Requirement

(a) To document the compliance status with Conditions D.1.1 and D.1.2(b)(3), the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage limit establish in Conditions D.1.1 and D.1.2(b)(3).

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

(2) The amount of coating material and solvent used on monthly basis. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(3) The total VOC used and emissions from rotogravure printing presses EU 101 (6RL), EU 103 (8RL), EU 104 (R17), 5X extrusion coater/laminator EU 201, 6X extrusion coater/laminator EU 204, 25L Laminator EU 205 and cold cleaner degreasing units EU102 and EU105, including cleanup solvent VOC, for each month and each compliance period.

(4) The total VOC input to the cold cleaner degreasing units EU102 and EU 105, for each month and each compliance period.

(b) To document the compliance status with Condition D.1.2(a)(3), the Permittee shall maintain records of the total amount of VOC delivered to the rotogravure printing press EU 101 (6RL).

(c) 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 as indicated and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.1.3.

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

(2) The amount of each coating material and solvent used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) The total VOC input to 5X extrusion coater/laminator, including coating, dilution solvents, and cleaning solvents, for each month and each compliance period.

(4) The total emission of VOCs emitted from extrusion coater/laminator EU 204 (6X) for each month.

(5) The total emission of VOCs emitted from extrusion coater/laminator EU 205 (25L) for each month.

(d) To document the compliance status with Condition D.1.6, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

(1) The name and address of the solvent supplier.

(2) The date of purchase (or invoice/bill dates of contract servicer indicating service date).

(3) The type of solvent purchased.

(4) The total volume of the solvent purchased.

(5) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

(e) To document the compliance status with Condition D.1.15, the Permittee shall maintain continuous temperature records for the 6RL thermal oxidizer, Megtec thermal oxidizer, 6X thermal oxidizer and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

(f) To document the compliance status with Condition D.1.16, the Permittee shall maintain daily records of the duct pressure or fan amperage for the 6RL thermal oxidizer Megtec thermal oxidizer and 6X thermal oxidizer. The Permittee shall include in its daily record when the readings are not taken and the reason for the lack of the readings (e.g. the process did not operate that day).

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

D.1.18 Reporting Requirement

Quarterly reports of the total VOC emissions from rotogravure printing presses 6RL, 8RL, and R17, 5X extrusion coater/laminator EU 201, 6X extrusion coater/laminator EU 204, 25L laminator EU 205, cold cleaner degreasing units EU102, EU105 and Inkjet Printer and QR Printer, including cleanup solvent VOC, the VOC input to the cold cleaner degreasing unit EU 102, the total amount of VOC delivered to rotogravure printing press EU 101 (6RL), and the VOC input to the 5X extrusion coater/laminator EU 201; and quarterly summaries of the information to document the compliance status with Conditions D.1.1, D.1.2(a)(3), D.1.2(b)(3), and D.1.3(a) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.

The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official,” as defined by 326 IAC 2-7-1(35).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(f) One (1) 25L laminator, identified as EU 205, approved in 2022 for construction, using Megtec thermal oxidizer as control when using solvent borne coatings, with a heat input rate of 8.7 MMBtu per hour, and exhausting to stack S13. When coating using water-based coatings, the thermal oxidizer will not be operated, and emissions will be exhausted through stack 14. Product being coated is web substrate packaging material, application method used is roll coating, and consisting of the following units:

(3) One (1) 8.0 MMBtu/hr hot oil system.

(g) One (1) natural gas boiler, identified as Boiler EU 11 (No. 1), constructed in 1997, with a heat input capacity of 20.925 MMBtu/hr, and exhausting to stack 01.

Under 40 CFR 60, Subpart Dc, this unit is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this unit is considered an affected facility.

(h) One (1) natural gas boiler, identified as Boiler EU 12 (No. 2), constructed in 1998, with a heat input capacity of 20.925 MMBtu/hr, and exhausting to stack 02.

Under 40 CFR 60, Subpart Dc, this unit is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this unit is considered an affected facility.

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

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

D.2.1 Particulate Emissions Limitations [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the following units shall not exceed the following:

Emission Unit	Unit ID	PM Limit (lb/MMBtu)
Boiler	EU 11	0.49
Boiler	EU 12	0.41
Hot Oil Heating System	(25 L Laminator)	0.39

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

SECTION E.1 NSPS

Emissions Unit Description:

(g) One (1) natural gas boiler, identified as Boiler EU 11 (No. 1), constructed in 1997, with a heat input capacity of 20.925 MMBtu/hr, and exhausting to stack 01.

Under 40 CFR 60, Subpart Dc, this unit is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this unit is considered an affected facility.

(h) One (1) natural gas boiler, identified as Boiler EU 12 (No. 2), constructed in 1998, with a heat input capacity of 20.925 MMBtu/hr, and exhausting to stack 02.

Under 40 CFR 60, Subpart Dc, this unit is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this unit is considered an affected facility.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(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, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart Dc.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

E.1.2 Small Industrial-Commercial-Institutional Steam Generating Units NSPS [326 IAC 12] [40 CFR Part 60, Subpart Dc]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart Dc (included as Attachment A to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.48 (c)

SECTION E.2 NESHAP

Emissions Unit Description:

(g) One (1) natural gas boiler, identified as Boiler EU 11 (No. 1), constructed in 1997, with a heat input capacity of 20.925 MMBtu/hr, and exhausting to stack 01.

Under 40 CFR 60, Subpart Dc, this unit is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this unit is considered an affected facility.

(h) One (1) natural gas boiler, identified as Boiler EU 12 (No. 2), constructed in 1998, with a heat input capacity of 20.925 MMBtu/hr, and exhausting to stack 02.

Under 40 CFR 60, Subpart Dc, this unit is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this unit is considered an affected 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)]

E.2.1 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 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart DDDDD.

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

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

E.2.2 Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters NESHAP [40 CFR Part 63, Subpart DDDDD] [326 IAC 20-95]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart DDDDD (included as Attachment B to the operating permit), which are incorporated by reference as 326 IAC 20-95, for the emission unit(s) listed above:

(1) 40 CFR 63.7480
(2) 40 CFR 63.7485
(3) 40 CFR 63.7490 (a)(1) and (d)
(4) 40 CFR 63.7491 (d)
(5) 40 CFR 63.7495 (b)
(6) 40 CFR 63.7499 (l)
(7) 40 CFR 63.7500 (a)(1)
(8) 40 CFR 63.7505 (a)
(9) 40 CFR 63.7545 (b), (e)(1) and (8)
(10) 40 CFR 63.7550 (b)
(11) 40 CFR 63.7555 (a)(1)

(12) 40 CFR 63.7565
(13) 40 CFR 63.7570
(14) 40 CFR 63.7575
(15) Table 3 to Subpart DDDDD

SECTION E.3 NESHAP

Emissions Unit Description:

(a) One (1) 5X extrusion coater/laminator, identified as EU 201, installed in 1987, product being coated is web substrate packaging material, application method used is roll coating, exhausting to stack 21. EU 201 consists of the following units:

(1) One (1) extrusion laminator;

(2) One (1) coating/adhesive lamination deck;

(3) One (1) coating deck; and

(4) Two (2) coating station dryers.

Under 40 CFR 63, Subpart JJJJ, these units are considered affected facilities.

(b) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 103 (8RL), constructed in 1995, having a maximum line speed of 1000 ft/min and a maximum printing width of 51.5 inches, using thermal oxidizer Megtec as control, using natural gas, with a heat input rate of 8.7 MMBtu/hr, and exhausting to stack 13. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.
Under 40 CFR 63, Subpart JJJJ, this unit is considered an affected facility.

(f) One (1) 25L laminator, identified as EU 205, approved in 2022 for construction, using Megtec thermal oxidizer as control when using solvent borne coatings, with a heat input rate of 8.7 MMBtu/hr, and exhausting to stack S13. When coating using water-based coatings, the thermal oxidizer will not be operated, and emissions will be exhausted through stack 14. Product being coated is web substrate packaging material, application method used is roll coating, and consisting of the following units:

(1) Two (2) extrusion laminators;

(2) Two (2) coating/adhesive lamination stations, identified as No. 1 and No. 2, each utilizing a gravure cylinder application system, each with a permanent enclosure capture system, each coating a maximum of 43.1 million (MM) square inches per hour; and

(3) One (1) 8.0 MMBtu/hr hot oil system.

Under 40 CFR 63, Subpart JJJJ, these units are considered affected facilities.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.3.1 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 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as

326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart JJJJ.

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

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

E.3.2 Paper and Other Web Coating NESHAP [40 CFR Part 63, Subpart JJJJ] [326 IAC 20-65]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart JJJJ (included as Attachment C to the operating permit), which are incorporated by reference as 326 IAC 20-65, for the emission unit(s) listed above:

(1) 40 CFR 63.3280
(2) 40 CFR 63.3290
(3) 40 CFR 63.3300
(4) 40 CFR 63.3310
(5) 40 CFR 63.3320
(6) 40 CFR 63.3321
(7) 40 CFR 63.3330
(8) 40 CFR 63.3340
(9) 40 CFR 63.3350
(10) 40 CFR 63.3360
(11) 40 CFR 63.3370
(12) 40 CFR 63.3400
(13) 40 CFR 63.3410
(14) Table 1 of Subpart JJJJ - Applicable portions only
(15) Table 2 of Subpart JJJJ

SECTION E.4 NESHAP

Emissions Unit Description:

(a) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 101 (6RL), constructed in 1987, having a maximum line speed of 1000 ft/min and a maximum printing width of 52 inches, using thermal oxidizer 6RL as control, using natural gas, with a heat input rate of 24.0 MMBtu/hr, and exhausting to stack S11. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.

(b) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 103 (8RL), constructed in 1995, having a maximum line speed of 1000 ft/min and a maximum printing width of 51.5 inches, using thermal oxidizer Megtec as control, using natural gas, with a heat input rate of 8.7 MMBtu/hr, and exhausting to stack 13. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.

(e) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 104 (R17), constructed in 2022, having a maximum line speed of 1312 ft/min and a maximum printing width of 52 inches, using thermal oxidizer Megtec as control, with a heat input rate of 8.7 MMBtu/hr, and exhausting to stack S13. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected 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)]

E.4.1 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 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart KK.

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

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

E.4.2 Printing and Publishing Industry NESHAP [40 CFR Part 63, Subpart KK] [326 IAC 20-18]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart KK (included as Attachment D to the operating permit), which are incorporated by reference as 326 IAC 20-18, for the emission unit(s) listed above:

(1) 40 CFR 63.820 (a)(1)
(2) 40 CFR 63.821 (a)(2)
(3) 40 CFR 63.822
(4) 40 CFR 63.823
(5) 40 CFR 63.825 (a), (b)(7), (d) and (h)
(6) 40 CFR 63.826
(7) 40 CFR 63.827
(8) 40 CFR 63.828
(9) 40 CFR 63.829
(10) Table 1 of Subpart KK

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

Source Name:	Sonoco Flexible Packaging, Inc.
Source Address:	6502 South US Highway 31, Edinburgh, Indiana 46124
Part 70 Permit No.:	T081-47176-00005

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: Sonoco Flexible Packaging, Inc.
Source Address: 6502 South US Highway 31, Edinburgh, Indiana 46124
Part 70 Permit No.: T081-47176-00005

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

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

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

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

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

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

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

Form Completed by: ______________________________

Title / Position: ______________________________

Date: ______________________________

Phone: ______________________________

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

Part 70 Usage Report

(Submit Report Quarterly)

Source Name:	Sonoco Flexible Packaging, Inc.
Source Address:	6502 South US Highway 31, Edinburgh, Indiana 46124
Part 70 Permit No.:	T081-47176-00005
Facility:	Rotogravure printing presses EU 101 (6RL), EU 103 (8RL), and EU 104 (R17), 5X extrusion coater/laminator EU 201, 6X extrusion coater/laminator EU 204, 25L laminator EU 205, cold cleaner degreasing units EU102 and EU105, Inkjet Printer and QR Printer.
Parameter:	VOC Emissions
Limit:	less than 246.3 tons per twelve (12) consecutive month period

QUARTER : ________________YEAR:_____________________

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

☐ 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: Sonoco Flexible Packaging, Inc.
Source Address: 6502 South US Highway 31, Edinburgh, Indiana 46124
Part 70 Permit No.: T081-47176-00005
Facility: Rotogravure printing press EU 101 (6RL)
Parameter: VOC Input
Limit: Less than 6,738 tons per twelve (12) consecutive month period

QUARTER:_____________________ YEAR:_____________________

Month	Column 1	Column 2	Column 1 + Column 2
	(VOC Input) (Rotogravure printing press EU 101 (6RL))	(VOC Input) (Rotogravure printing press EU 101 (6RL))	(VOC Input) (Rotogravure printing press EU 101 (6RL))
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: ___________________

Submitted by: ____

Title / Position: ____

Signature: ____

Date: ____

Phone:____

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

Part 70 Quarterly Report

Source Name:	Sonoco Flexible Packaging, Inc.
Source Address:	6502 South US Highway 31, Edinburgh, Indiana 46124
Part 70 Permit No.:	T081-47176-00005
Facility:	Degreasing unit EU102
Parameter:	VOC Input
Limit:	Less than 16.43 tons per twelve (12) consecutive month period

QUARTER:____________________ YEAR:____________________

Month	Column 1	Column 2	Column 1 + Column 2
	(VOC Input) (Degreasing unit EU102)	(VOC Input) (Degreasing unit EU102))	(VOC Input) (Degreasing unit EU102
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: __________________

Submitted by: ____

Title / Position: ____

Signature: ____

Date: ____

Phone:____

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

Part 70 Quarterly Report

Source Name:	Sonoco Flexible Packaging, Inc.
Source Address:	6502 South US Highway 31, Edinburgh, Indiana 46124
Part 70 Permit No.:	T081-47176-00005
Facility:	5X extrusion coater/laminator (EU 201)
Parameter:	VOC Emissions
Limit:	Less than twenty-five (25) tons per twelve (12) consecutive month period

QUARTER:_____________________ YEAR:_____________________

Month	Column 1	Column 2	Column 1 + Column 2
	(VOC Emissions) (5X extrusion coater/laminator (EU 201))	(VOC Emissions) (5X extrusion coater/laminator (EU 201))	(VOC Emissions) (5X extrusion coater/laminator (EU 201))
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: ___________________

Submitted by: ____

Title / Position: ____

Signature: ____

Date: ____

Phone: ____

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

Source Name: Sonoco Flexible Packaging, Inc.
Source Address: 6502 South US Highway 31, Edinburgh, Indiana 46124
Part 70 Permit No.: T081-47176-00005

Months: ___________ **to** ____________ **Year:** ______________

Page 1 of 2

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

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

Part 70 Operating Permit No: 081-47176-00005

[Downloaded from the eCFR on May 13, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, § 60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§ 60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in § 60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under § 60.14.

(e) Affected facilities (*i.e.* heat recovery steam generators and fuel heaters) that are associated with stationary combustion turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators, fuel heaters, and other affected facilities that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator, fuel heater, or other affected facility is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The stationary combustion turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(f) Any affected facility that meets the applicability requirements of and is subject to subpart AAAA or subpart CCCC of this part is not subject to this subpart.

(g) Any facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not subject to this subpart.

(h) Affected facilities that also meet the applicability requirements under subpart J or subpart Ja of this part are subject to the PM and NO_X standards under this subpart and the SO_2 standards under subpart J or subpart Ja of this part, as applicable.

(i) Temporary boilers are not subject to this subpart.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

§ 60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see § 60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (*i.e.* , the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see § 60.17), diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see § 60.17), kerosine, as defined by the American Society of Testing and Materials in ASTM D3699 (incorporated by reference, see § 60.17), biodiesel as defined by the American Society of Testing and Materials in ASTM D6751 (incorporated by reference, see § 60.17), or biodiesel blends as defined by the American Society of Testing and Materials in ASTM D7467 (incorporated by reference, see § 60.17).

Dry flue gas desulfurization technology means a SO_2 control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2 control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under § 60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see § 60.17); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO_2 emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see § 60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Temporary boiler means a steam generating unit that combusts natural gas or distillate oil with a potential SO_2 emissions rate no greater than 26 ng/J (0.060 lb/MMBtu), and the unit is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A steam generating unit is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The steam generating unit or a replacement remains at a location for more than 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.

Wet flue gas desulfurization technology means an SO_2 control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO_2 .

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

§ 60.42c Standard for sulfur dioxide (SO2).

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO_2 emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input SO_2 emissions limit or the 90 percent SO_2 reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO_2 emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 50 percent (0.50) of the potential SO_2 emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO_2 reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/h) or less;

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area; or

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the following:

(1) The percent of potential SO_2 emission rate or numerical SO_2 emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel;

(ii) Has a heat input capacity greater than 22 MW (75 MMBtu/h); and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

Where:

E_s = SO_2 emission limit, expressed in ng/J or lb/MMBtu heat input;

K_a = 520 ng/J (1.2 lb/MMBtu);

K_b = 260 ng/J (0.60 lb/MMBtu);

K_c = 215 ng/J (0.50 lb/MMBtu);

H_a = Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];

H_b = Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and

H_c = Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO_2 emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO_2 emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO_2 control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), (3), or (4) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under § 60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(3) Coal-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(4) Other fuels-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(i) The SO_2 emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) For affected facilities located in noncontinental areas and affected facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

§ 60.43c Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph (c).

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences modification

after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) An owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under § 60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO_2 emissions is not subject to the PM limit in this section.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and § 60.8(b), performance tests required under § 60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in § 60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under § 60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO_2 emission limits under § 60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and § 60.8, compliance with the percent reduction requirements and SO_2 emission limits under § 60.42c is based on the average percent reduction and the average SO_2 emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO_2 emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly SO_2 emission rate (E_{ho}) and the 30-day average SO_2 emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate E_{ao} when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E_{ho} (E_{ho} o) is used in Equation 19-19 of Method 19 of appendix A of this part to compute the adjusted E_{ao} (E_{ao} o). The E_{ho} o is computed using the following formula:

$$E_{ho}o = \frac{E_{ho} - E_{w}(1 - X_{1})}{X_{1}}$$

Where:

E_{ho} o = Adjusted E_{ho} , ng/J (lb/MMBtu);

E_{ho} = Hourly SO_2 emission rate, ng/J (lb/MMBtu);

E_w = SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume $E_w = 0$.

X_k = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of § 60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters E_w or X_k if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under § 60.42c(a) or (b) shall determine compliance with the SO_2 emission limits under § 60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO_2 emission rate is computed using the following formula:

$$\%P_s = 100\left(1 - \frac{\%R_g}{100}\right)\left(1 - \frac{\%R_f}{100}\right)$$

Where:

$\%P_s$ = Potential SO_2 emission rate, in percent;

$\%R_g$ = SO_2 removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$ = SO_2 removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g$ ($\%R_g$ o) is computed from E_{ao} o from paragraph (e)(1) of this section and an adjusted average SO_2 inlet rate (E_{ai} o) using the following formula:

$$\%R_g{}^{o} = 100\left(1 - \frac{E_{ao}^{o}}{E_{ai}^{o}}\right)$$

Where:

$\%R_g$ o = Adjusted $\%R_g$, in percent;

E_{ao} o = Adjusted E_{ao} , ng/J (lb/MMBtu); and

E_{ai} o = Adjusted average SO_2 inlet rate, ng/J (lb/MMBtu).

(ii) To compute E_{ai} o, an adjusted hourly SO_2 inlet rate (E_{hi} o) is used. The E_{hi} o is computed using the following formula:

$$E_{hi}o = \frac{E_{hi} - E_w(1 - X_k)}{X_k}$$

Where:

E_{hi} o = Adjusted E_{hi} , ng/J (lb/MMBtu);

E_{hi} = Hourly SO_2 inlet rate, ng/J (lb/MMBtu);

E_w = SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume E_w = 0; and

X_k = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under § 60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under § 60.46c(d)(2).

(h) For affected facilities subject to § 60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in § 60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2 standards under § 60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under § 60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or E_{ho} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under § 60.43c shall conduct an initial performance test as required under § 60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3A or 3B of appendix A-2 of this part shall be used for gas analysis when applying Method 5 or 5B of appendix A-3 of this part or 17 of appendix A-6 of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen (O_2) or carbon dioxide (CO_2) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The O_2 or CO_2 measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A-4 of this part shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under § 60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with § 60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under § 60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under § 60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (c)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (c)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under § 60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (c)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O_2 (or CO_2) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall be used; and

(ii) For O2 (or CO_2), Method 3A or 3B of appendix A-2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(14) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in § 60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (*i.e.,* reference method) data and performance test (*i.e.,* compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/ert tool.html/*) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

(d) The owner or operator of an affected facility seeking to demonstrate compliance under § 60.43c(e)(4) shall follow the applicable procedures under § 60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/h).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9463, Feb. 16, 2012]

§ 60.46c Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO_2 emission limits under § 60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO_2 concentrations and either O_2 or CO_2 concentrations at the outlet of the SO_2 control device (or the outlet of the steam generating unit if no SO_2 control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under § 60.42c shall measure SO_2 concentrations and either O_2 or CO_2 concentrations at both the inlet and outlet of the SO_2 control device.

(b) The 1-hour average SO_2 emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under § 60.42c. Each 1-hour average SO_2 emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under § 60.13(h)(2). Hourly SO_2 emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under § 60.42c, the span value of the SO_2 CEMS at the inlet to the SO_2 control device shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted, and the span value of the SO_2 CEMS at the outlet from the SO_2 control device shall be 50 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of § 60.42c, the span value of the SO_2 CEMS at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO_2 input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when

calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO_2 at the inlet or outlet of the SO_2 control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable SO_2 and CO_2 measurement train operated at the candidate location and a second similar train operated according to the procedures in § 3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to § 60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, as described under § 60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§ 60.47c Emission monitoring for particulate matter.

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under § 60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard in § 60.43c(c) that is not required to use a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to use a COMS shall conduct a performance test using Method 9 of appendix A-4 of this part and the procedures in § 60.11 to demonstrate compliance with the applicable limit in § 60.43c by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A-4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A-4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A-4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.,* 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (*i.e.,* 90 seconds) or conduct a new Method 9 of appendix A-4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in § 60.45c(a)(8).

(ii) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) All COMS shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Owners and operators of an affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO2 or PM emissions and that are subject to an opacity standard in § 60.43c(c) are not required to operate a COMS if they follow the applicable procedures in § 60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in § 60.45c(c). The CEMS specified in paragraph § 60.45c(c) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) Owners and operators of an affected facility that is subject to an opacity standard in § 60.43c(c) and that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO_2 , or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section; or

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in § 60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in § 60.13(h)(2).

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) An owner or operator of an affected facility that is subject to an opacity standard in § 60.43c(c) is not required to operate a COMS provided that the affected facility meets the conditions in either paragraphs (f)(1), (2), or (3) of this section.

(1) The affected facility uses a fabric filter (baghouse) as the primary PM control device and, the owner or operator operates a bag leak detection system to monitor the performance of the fabric filter according to the requirements in section § 60.48Da of this part.

(2) The affected facility uses an ESP as the primary PM control device, and the owner or operator uses an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the requirements in section § 60.48Da of this part.

(3) The affected facility burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the owner or operator operates the unit according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§ 60.8 and 60.11 that the owner or operator submit any deviations with the excess emissions report required under § 60.48c(c).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9463, Feb. 16, 2012]

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by § 60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under § 60.42c, or § 60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO_2 emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of § 60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2 emission limits of § 60.42c, or the PM or opacity limits of § 60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in § 60.7, the owner or operator of an affected facility subject to the opacity limits in § 60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator

(d) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO_2 emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO_2 emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO_2 or diluent (O_2 or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in § 60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in § 60.48c(f) to demonstrate compliance with the SO_2 standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in § 60.42C to use fuel certification to demonstrate compliance with the SO_2 standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under § 60.42c or § 60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

Attachment B

Part 70 Operating Permit No: 081-47176-00005

[Downloaded from the eCFR on December 7, 2022]

Title 40: Protection of Environment

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

Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

Source: 76 FR 15664, Mar. 21, 2011, unless otherwise noted.

What This Subpart Covers

§ 63.7480 What is the purpose of this subpart?

This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAP. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and work practice standards.

§ 63.7485 Am I subject to this subpart?

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in § 63.7575 that is located at, or is part of, a major source of HAP, except as specified in § 63.7491. For purposes of this subpart, a major source of HAP is as defined in § 63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in § 63.7575.

[78 FR 7162, Jan. 31, 2013]

§ 63.7490 What is the affected source of this subpart?

(a) This subpart applies to new, reconstructed, and existing affected sources as described in paragraphs (a)(1) and (2) of this section.

(1) The affected source of this subpart is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in § 63.7575.

(2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler or process heater, as defined in § 63.7575, located at a major source.

(b) A boiler or process heater is new if you commence construction of the boiler or process heater after June 4, 2010, and you meet the applicability criteria at the time you commence construction.

(c) A boiler or process heater is reconstructed if you meet the reconstruction criteria as defined in § 63.2, you commence reconstruction after June 4, 2010, and you meet the applicability criteria at the time you commence reconstruction.

(d) A boiler or process heater is existing if it is not new or reconstructed.

(e) An existing electric utility steam generating unit (EGU) that meets the applicability requirements of this subpart after the effective date of this final rule due to a change (e.g., fuel switch) is considered to be an existing source under this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

§ 63.7491 Are any boilers or process heaters not subject to this subpart?

The types of boilers and process heaters listed in paragraphs (a) through (n) of this section are not subject to this subpart.

(a) An electric utility steam generating unit (EGU) covered by subpart UUUUU of this part or a natural gas-fired EGU as defined in subpart UUUUU of this part firing at least 85 percent natural gas on an annual heat input basis.

(b) A recovery boiler or furnace covered by subpart MM of this part.

(c) A boiler or process heater that is used specifically for research and development, including test steam boilers used to provide steam for testing the propulsion systems on military vessels. This does not include units that provide heat or steam to a process at a research and development facility.

(d) A hot water heater as defined in this subpart.

(e) A refining kettle covered by subpart X of this part.

(f) An ethylene cracking furnace covered by subpart YY of this part.

(g) Blast furnace stoves as described in EPA-453/R-01-005 (incorporated by reference, see § 63.14).

(h) Any boiler or process heater that is part of the affected source subject to another subpart of this part, such as boilers and process heaters used as control devices to comply with subparts JJJ, OOO, PPP, and U of this part.

(i) Any boiler or process heater that is used as a control device to comply with another subpart of this part, or part 60, part 61, or part 65 of this chapter provided that at least 50 percent of the average annual heat input during any 3 consecutive calendar years to the boiler or process heater is provided by regulated gas streams that are subject to another standard.

(j) Temporary boilers and process heaters as defined in this subpart.

(k) Blast furnace gas fuel-fired boilers and process heaters as defined in this subpart.

(l) Any boiler or process heater specifically listed as an affected source in any standard(s) established under section 129 of the Clean Air Act.

(m) A unit that burns hazardous waste covered by Subpart EEE of this part. A unit that is exempt from Subpart EEE as specified in § 63.1200(b) is not covered by Subpart EEE.

(n) Residential boilers as defined in this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013; 80 FR 72806, Nov. 20, 2015]

§ 63.7495 When do I have to comply with this subpart?

(a) If you have a new or reconstructed boiler or process heater, you must comply with this subpart by April 1, 2013, or upon startup of your boiler or process heater, whichever is later.

(b) If you have an existing boiler or process heater, you must comply with this subpart no later than January 31, 2016, except as provided in § 63.6(i).

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, paragraphs (c)(1) and (2) of this section apply to you.

(1) Any new or reconstructed boiler or process heater at the existing source must be in compliance with this subpart upon startup.

(2) Any existing boiler or process heater at the existing source must be in compliance with this subpart within 3 years after the source becomes a major source.

(d) You must meet the notification requirements in § 63.7545 according to the schedule in § 63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.

(e) If you own or operate an industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for the exemption in § 63.7491(l) for commercial and industrial solid waste incineration units covered by part 60, subpart CCCC or subpart DDDD, and you cease combusting solid waste, you must be in compliance with this subpart and are no longer subject to part 60, subparts CCCC or DDDD beginning on the effective date of the switch as identified under the provisions of § 60.2145(a)(2) and (3) or § 60.2710(a)(2) and (3).

(f) If you own or operate an existing EGU that becomes subject to this subpart after January 31, 2016, you must be in compliance with the applicable existing source provisions of this subpart on the effective date such unit becomes subject to this subpart.

(g) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for a exemption in § 63.7491(i) that becomes subject to this subpart after January 31, 2013, you must be in compliance with the applicable existing source provisions of this subpart within 3 years after such unit becomes subject to this subpart.

(h) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory after the compliance date of this subpart, you must be in compliance with the applicable existing source provisions of this subpart on the effective date of the fuel switch or physical change.

(i) If you own or operate a new industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory, you must be in compliance with the applicable new source provisions of this subpart on the effective date of the fuel switch or physical change.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015]

Emission Limitations and Work Practice Standards

§ 63.7499 What are the subcategories of boilers and process heaters?

The subcategories of boilers and process heaters, as defined in § 63.7575 are:

(a) Pulverized coal/solid fossil fuel units.

(b) Stokers designed to burn coal/solid fossil fuel.

(c) Fluidized bed units designed to burn coal/solid fossil fuel.

(d) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solid.

(e) Fluidized bed units designed to burn biomass/bio-based solid.

(f) Suspension burners designed to burn biomass/bio-based solid.

(g) Fuel cells designed to burn biomass/bio-based solid.

(h) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(i) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid.

(j) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(k) Units designed to burn liquid fuel that are non-continental units.

(l) Units designed to burn gas 1 fuels.

(m) Units designed to burn gas 2 (other) gases.

(n) Metal process furnaces.

(o) Limited-use boilers and process heaters.

(p) Units designed to burn solid fuel.

(q) Units designed to burn liquid fuel.

(r) Units designed to burn coal/solid fossil fuel.

(s) Fluidized bed units with an integrated fluidized bed heat exchanger designed to burn coal/solid fossil fuel.

(t) Units designed to burn heavy liquid fuel.

(u) Units designed to burn light liquid fuel.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

§ 63.7500 What emission limitations, work practice standards, and operating limits must I meet?

(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b) through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

(1) You must meet each emission limit and work practice standard in Tables 1 through 3 and 11 through 15 to this subpart that applies to your boiler or process heater, for each boiler or process heater at your source, except as provided under § 63.7522. The output-based emission limits, in units of pounds per million Btu of steam output, in Table 1 or 2 to this subpart are an alternative applicable only to boilers and process heaters that generate either steam, cogenerate steam with electricity, or both. The output-based emission limits, in units of pounds per megawatt-hour, in Table 1 or 2 to this subpart are an alternative applicable only to boilers that

generate only electricity. Boilers that perform multiple functions (cogeneration and electricity generation) or supply steam to common headers would calculate a total steam energy output using Equation 1 of § 63.7575 to demonstrate compliance with the output-based emission limits, in units of pounds per million Btu of steam output, in Table 1 or 2 to this subpart. If you operate a new boiler or process heater, you can choose to comply with alternative limits as discussed in paragraphs (a)(1)(i) through (iv) of this section, but on or after October 6, 2025, you must comply with the emission limits in Table 1 to this subpart. If you operate an existing boiler or process heater, you can choose to comply with alternative limits as discussed in paragraph (a)(1)(v) of this section, but on or after October 6, 2025 you must comply with the emission limits in Table 2 to this subpart.

(i) If your boiler or process heater commenced construction or reconstruction after June 4, 2010, and before May 20, 2011, you may comply with the emission limits in Table 11 or 14 to this subpart until January 31, 2016.

(ii) If your boiler or process heater commenced construction or reconstruction on or after May 20, 2011, and before December 23, 2011, you may comply with the emission limits in Table 12 or 14 to this subpart until January 31, 2016.

(iii) If your boiler or process heater commenced construction or reconstruction on or after December 23, 2011, and before April 1, 2013, you may comply with the emission limits in Table 13 or 14 to this subpart until January 31, 2016.

(iv) If you operate a new boiler or process heater, you must comply with either the emission limits in Table 1 to this subpart or the emission limits in Table 14 to this subpart until you must comply with the emission limits in Table 1.

(v) If you operate an existing boiler or process heater, you must comply with either the emission limits in Table 2 to this subpart or the emission limits in Table 15 to this subpart until you must comply with the emission limits in Table 2.

(2) You must meet each operating limit in Table 4 to this subpart that applies to your boiler or process heater. If you use a control device or combination of control devices not covered in Table 4 to this subpart, or you wish to establish and monitor an alternative operating limit or an alternative monitoring parameter, you must apply to the EPA Administrator for approval of alternative monitoring under § 63.8(f).

(3) At all times, you must operate and maintain any affected source (as defined in § 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that 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.

(b) As provided in § 63.6(g), EPA may approve use of an alternative to the work practice standards in this section.

(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in § 63.7540. They are not subject to the emission limits in Tables 1 and 2 or Tables 11 through 15 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.

(d) Boilers and process heaters with a heat input capacity of less than or equal to 5 million Btu per hour in the units designed to burn gas 2 (other) fuels subcategory or units designed to burn light liquid fuels subcategory must complete a tune-up every 5 years as specified in § 63.7540.

(e) Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or Tables 11 through 15 to this subpart, or the operating limits in Table 4 to this subpart.

(f) These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with items 5 and 6 of Table 3 to this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015; 87 FR 60840, Oct. 6, 2022]

§ 63.7501 [Reserved]

General Compliance Requirements

§ 63.7505 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limits, work practice standards, and operating limits in this subpart. These emission and operating limits apply to you at all times the affected unit is operating except for the periods noted in § 63.7500(f).

(b) [Reserved]

(c) You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or continuous monitoring systems (CMS), including a continuous emission monitoring system (CEMS), continuous opacity monitoring system (COMS), continuous parameter monitoring system (CPMS), or particulate matter continuous parameter monitoring system (PM CPMS), where applicable. You may demonstrate compliance with the applicable emission limit for hydrogen chloride (HCl), mercury, or total selected metals (TSM) using fuel analysis if the emission rate calculated according to § 63.7530(c) is less than the applicable emission limit. For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard. Otherwise, you must demonstrate compliance for HCl, mercury, or TSM using performance stack testing, if subject to an applicable emission limit listed in Table 1 or 2 or Tables 11 through 15 to this subpart.

(d) If you demonstrate compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits through the use of CPMS, or with a CEMS or COMS, you must develop a site-specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 63.8(f).

(1) For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to the Administrator for approval upon request, a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in § 63.8(d) and the elements described in paragraphs (d)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to part 60 of this chapter and that meet the requirements of § 63.7525. Using the process described in § 63.8(f)(4), you may request approval of alternative monitoring system quality assurance and quality control procedures in place of those specified in this paragraph and, if approved, include the alternatives in your site-specific monitoring plan.

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations, accuracy audits, analytical drift).

(2) In your site-specific monitoring plan, you must also address paragraphs (d)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c) (as applicable in Table 10 to this subpart), (e)(1), and (e)(2)(i).

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

(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

(e) If you have an applicable emission limit, and you choose to comply using definition (2) of “startup” in § 63.7575, you must develop and implement a written startup and shutdown plan (SSP) according to the requirements in Table 3 to this subpart. The SSP must be maintained onsite and available upon request for public inspection.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7164, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015; 87 FR 60841, Oct. 6, 2022]

Testing, Fuel Analyses, and Initial Compliance Requirements

§ 63.7510 What are my initial compliance requirements and by what date must I conduct them?

(a) For each boiler or process heater that is required or that you elect to demonstrate compliance with any of the applicable emission limits in Table 1 or 2 or Tables 11 through 15 to this subpart through performance (stack) testing, your initial compliance requirements include all the following:

(1) Conduct performance tests according to § 63.7520 and Table 5 to this subpart.

(2) Conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart, except as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) For each boiler or process heater that burns a single type of fuel, you are not required to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart. For purposes of this subpart, units that use a supplemental fuel only for startup, unit shutdown, and transient flame stability purposes still qualify as units that burn a single type of fuel, and the supplemental fuel is not subject to the fuel analysis requirements under § 63.7521 and Table 6 to this subpart.

(ii) When natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels, you are not required to conduct a fuel analysis of those Gas 1 fuels according to § 63.7521 and Table 6 to this subpart. If gaseous fuels other than natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels and those non-Gas 1 gaseous fuels are subject to another subpart of this part, part 60, part 61, or part 65, you are not required to conduct a fuel analysis of those non-Gas 1 fuels according to § 63.7521 and Table 6 to this subpart.

(iii) You are not required to conduct a chlorine fuel analysis for any gaseous fuels. You must conduct a fuel analysis for mercury on gaseous fuels unless the fuel is exempted in paragraphs (a)(2)(i) and (ii) of this section.

(3) Establish operating limits according to § 63.7530 and Table 7 to this subpart.

(4) Conduct CMS performance evaluations according to § 63.7525.

(b) For each boiler or process heater that you elect to demonstrate compliance with the applicable emission limits in Table 1 or 2 or Tables 11 through 15 to this subpart for HCl, mercury, or TSM through fuel analysis, your initial compliance requirement is to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart and establish operating limits according to § 63.7530 and Table 8 to this subpart. The fuels described in paragraphs (a)(2)(i) and (ii) of this section are exempt from these fuel analysis and operating limit requirements. The fuels described in paragraph (a)(2)(ii) of this section are exempt from the chloride fuel analysis and operating limit requirements. Boilers and process heaters that use a CEMS for mercury or HCl are exempt from the performance testing and operating limit requirements specified in paragraph (a) of this section for the HAP for which CEMS are used.

(c) If your boiler or process heater is subject to a carbon monoxide (CO) limit, your initial compliance demonstration for CO is to conduct a performance test for CO according to Table 5 to this subpart or conduct a performance evaluation of your continuous CO monitor, if applicable, according to § 63.7525(a). Boilers and process heaters that use a CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Table 1 or 2 or Tables 11 through 15 to this subpart, as specified in § 63.7525(a), are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in paragraph (a) of this section.

(d) If your boiler or process heater is subject to a PM limit, your initial compliance demonstration for PM is to conduct a performance test in accordance with § 63.7520 and Table 5 to this subpart.

(e) For existing affected sources (as defined in § 63.7490), you must complete the initial compliance demonstrations, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the compliance date that is specified for your source in § 63.7495 and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than the compliance date specified in § 63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in § 63.7495.

(f) For new or reconstructed affected sources (as defined in § 63.7490), you must complete the initial compliance demonstration with the emission limits no later than July 30, 2013, or within 180 days after startup of the source, whichever is later.

(1) If you are demonstrating compliance with an emission limit in Tables 11 through 13 to this subpart that is less stringent than the applicable emission limit in Table 14 to this subpart, you must demonstrate compliance with the applicable emission limit in Table 14 no later than July 29, 2016.

(2) If you are demonstrating compliance with an emission limit in Table 14 to this subpart that is less stringent than the applicable emission limit in Table 1 to this subpart, you must demonstrate compliance with the applicable emission limit in Table 1 no later than October 6, 2025.

(g) For new or reconstructed affected sources (as defined in § 63.7490), you must demonstrate initial compliance with the applicable work practice standards in Table 3 to this subpart within the applicable annual, biennial, or 5-year schedule as specified in § 63.7515(d) following the initial compliance date specified in § 63.7495(a). Thereafter, you are required to complete the applicable annual, biennial, or 5-year tune-up as specified in § 63.7515(d).

(h) For affected sources (as defined in § 63.7490) that ceased burning solid waste consistent with § 63.7495(e) and for which the initial compliance date has passed, you must demonstrate compliance within 60 days of the effective date of the waste-to-fuel switch. If you have not conducted your compliance demonstration for this subpart within the previous 12 months, you must complete all compliance demonstrations for this subpart before you commence or recommence combustion of solid waste.

(i) For an existing EGU that becomes subject after January 31, 2016, you must demonstrate compliance within 180 days after becoming an affected source.

(j) For existing affected sources (as defined in § 63.7490) that have not operated between the effective date of the rule and the compliance date that is specified for your source in § 63.7495, you must complete the initial compliance demonstration, if subject to the emission limits in Table 2 or 14 to this subpart, as applicable, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the re-start of the affected source and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart. You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than 30 days after the re-start of the affected source and, if applicable, complete the one-time energy assessment specified in Table 3 to this subpart, no later than the compliance date specified in § 63.7495.

(k) For affected sources, as defined in § 63.7490, that switch subcategories consistent with § 63.7545(h) after the initial compliance date, you must demonstrate compliance within 60 days of the effective date of the switch, unless you had previously conducted your compliance demonstration for this subcategory within the previous 12 months.

[78 FR 7164, Jan. 31, 2013, as amended at 80 FR 72808, Nov. 20, 2015; 87 FR 60841, Oct. 6, 2022]

§ 63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?

(a) You must conduct all applicable performance tests according to § 63.7520 on an annual basis, except as specified in paragraphs (b) through (e), (g), and (h) of this section. Annual performance tests must be completed no more than 13 months after the previous performance test, except as specified in paragraphs (b) through (e), (g), and (h) of this section.

(b) If your performance tests for a given pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 15 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, you may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test. If you elect to demonstrate compliance using emission averaging under § 63.7522, you must continue to conduct performance tests annually. The requirement to test at maximum chloride input level is waived unless the stack test is conducted for HCl. The requirement to test at maximum mercury input level is waived unless the stack test is conducted for mercury. The requirement to test at maximum TSM input level is waived unless the stack test is conducted for TSM.

(c) If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit (as specified in Tables 1 and 2 or 11 through 15 to this subpart) for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 2-year period meet the required level (at or below 75 percent of the emission limit, as specified in Tables 1 and 2 or 11 through 15).

(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to § 63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in § 63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in § 63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in § 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in § 63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after April 1, 2013 or the initial startup of the new or reconstructed affected source, whichever is later.

(e) If you demonstrate compliance with the mercury, HCl, or TSM based on fuel analysis, you must conduct a monthly fuel analysis according to § 63.7521 for each type of fuel burned that is subject to an emission limit in Table 1 or 2 or Tables 11 through 15 to this subpart. You may comply with this monthly requirement by completing the fuel analysis any time within the calendar month as long as the analysis is separated from the previous analysis by at least 14 calendar days. If you burn a new type of fuel, you must conduct a fuel analysis before burning the new type of fuel in your boiler or process heater. You must still meet all applicable continuous compliance requirements in § 63.7540. If each of 12 consecutive monthly fuel analyses demonstrates 75 percent or less of the compliance level, you may decrease the fuel analysis frequency to quarterly for that fuel. If any quarterly sample exceeds 75 percent of the compliance level or you begin burning a new type of fuel, you must return to monthly monitoring for that fuel, until 12 months of fuel analyses are again less than 75 percent of the compliance level. If sampling is conducted on 1 day per month, samples should be no less than 14 days apart, but if multiple samples are taken per month, the 14-day restriction does not apply.

(f) You must report the results of performance tests and the associated fuel analyses within 60 days after the completion of the performance tests. This report must also verify that the operating limits for each boiler or process heater have not changed or provide documentation of revised operating limits established according to § 63.7530 and Table 7 to this subpart, as applicable. The reports for all subsequent performance tests must include all applicable information required in § 63.7550.

(g) For affected sources (as defined in § 63.7490) that have not operated since the previous compliance demonstration and more than 1 year has passed since the previous compliance demonstration, you must complete the subsequent compliance demonstration, if subject to the emission limits in Table 1 or 2 or Tables 11 through 15 to this subpart, no later than 180 days after the re-start of the affected source and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart. You must complete a subsequent tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) and the schedule described in § 63.7540(a)(13) for units that are not operating at the time of their scheduled tune-up.

(h) If your affected boiler or process heater is in the unit designed to burn light liquid subcategory and you combust ultra-low sulfur liquid fuel, you do not need to conduct further performance tests (stack tests or fuel analyses) if the pollutants measured during the initial compliance performance tests meet the emission limits in Tables 1 or 2 of this subpart providing you demonstrate ongoing compliance with the emissions limits by monitoring and recording the type of fuel combusted on a monthly basis. If you intend to use a fuel other than ultra-low sulfur liquid fuel, natural gas, refinery gas, or other gas 1 fuel, you must conduct new performance tests within 60 days of burning the new fuel type.

(i) If you operate a CO CEMS that meets the Performance Specifications outlined in § 63.7525(a)(3) to demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Table 1 or 2 or Tables 11 through 15 to this subpart, you are not required to conduct CO performance tests and are not subject to the oxygen concentration operating limit requirement specified in § 63.7510(a).

[78 FR 7165, Jan. 31, 2013, as amended at 80 FR 72808, Nov. 20, 2015; 87 FR 60842, Oct. 6, 2022]

§ 63.7520 What stack tests and procedures must I use?

(a) You must conduct all performance tests according to § 63.7(c), (d), (f), and (h). You must also develop a site-specific stack test plan according to the requirements in § 63.7(c). You shall conduct all performance tests under such conditions as the Administrator specifies to you based on the representative performance of each boiler or process heater for the period being tested. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests.

(b) You must conduct each performance test according to the requirements in Table 5 to this subpart.

(c) You must conduct each performance test under the specific conditions listed in Tables 5 and 7 to this subpart. You must conduct performance tests at representative operating load conditions while burning the type of fuel or mixture of fuels that has the highest content of chlorine and mercury, and TSM if you are opting to comply with the TSM alternative standard and you must demonstrate initial compliance and establish your operating limits based on these performance tests. These requirements could result in the need to conduct more than one performance test. Following each performance test and until the next performance test, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(d) You must conduct a minimum of three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must comply with the minimum applicable sampling times or volumes specified in Tables 1 and 2 or 11 through 15 to this subpart.

(e) To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 at 40 CFR part 60, appendix A-7 of this chapter to convert the measured particulate matter (PM) concentrations, the measured HCl concentrations, the measured mercury concentrations, and the measured TSM concentrations that result from the performance test to pounds per million Btu heat input emission rates.

(f) Except for a 30-day rolling average based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), you must use the method detection level as the measured emissions level for that pollutant in calculating compliance. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 29 fractions both for individual HAP metals and for total HAP metals) may include a combination of method detection level data and analytical data reported above the method detection level.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7166, Jan. 31, 2013; 87 FR 60842, Oct. 6, 2022]

§ 63.7521 What fuel analyses, fuel specification, and procedures must I use?

(a) For solid and liquid fuels, you must conduct fuel analyses for chloride and mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. For solid fuels and liquid fuels, you must also conduct fuel analyses for TSM if you are opting to comply with the TSM alternative standard. For gas 2 (other) fuels, you must conduct fuel analyses for mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard. For purposes of complying with this section, a fuel gas system that consists of multiple gaseous fuels collected and mixed with each other is considered a single fuel type and sampling and analysis is only required on the combined fuel gas system that will feed the boiler or process heater. Sampling and analysis of the individual gaseous streams prior to combining is not required. You are not required to conduct fuel analyses for fuels used for only startup, unit shutdown, and transient flame stability purposes. You are required to conduct fuel analyses only for fuels and units that are subject to emission limits for mercury, HCl, or TSM in Tables 1 and 2 or 11 through 15 to this subpart. Gaseous and liquid fuels are exempt from the sampling requirements in paragraphs (c) and (d) of this section.

(b) You must develop a site-specific fuel monitoring plan according to the following procedures and requirements in paragraphs (b)(1) and (2) of this section, if you are required to conduct fuel analyses as specified in § 63.7510.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in § 63.7510.

(2) You must include the information contained in paragraphs (b)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all fuel types anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the composite samples if your procedures are different from paragraph (c) or (d) of this section. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types.

(iv) For each anticipated fuel type, the analytical methods from Table 6, with the expected minimum detection levels, to be used for the measurement of chlorine or mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(c) You must obtain composite fuel samples for each fuel type according to the procedures in paragraph (c)(1) or (2) of this section, or the methods listed in Table 6 to this subpart, or use an automated sampling mechanism that provides representative composite fuel samples for each fuel type that includes both coarse and fine material. At a minimum, for demonstrating initial compliance by fuel analysis, you must obtain three composite samples. For monthly fuel analyses, at a minimum, you must obtain a single composite sample. For fuel analyses as part of a performance stack test, as specified in § 63.7510(a), you must obtain a composite fuel sample during each performance test run.

(1) If sampling from a belt (or screw) feeder, collect fuel samples according to paragraphs (c)(1)(i) and (ii) of this section.

(i) Stop the belt and withdraw a 6-inch wide sample from the full cross-section of the stopped belt to obtain a minimum two pounds of sample. You must collect all the material (fines and coarse) in the full cross-section. You must transfer the sample to a clean plastic bag.

(ii) Each composite sample will consist of a minimum of three samples collected at approximately equal intervals during the testing period for sampling during performance stack testing.

(2) If sampling from a fuel pile or truck, you must collect fuel samples according to paragraphs (c)(2)(i) through (iii) of this section.

(i) For each composite sample, you must select a minimum of five sampling locations uniformly spaced over the surface of the pile.

(ii) At each sampling site, you must dig into the pile to a uniform depth of approximately 18 inches. You must insert a clean shovel into the hole and withdraw a sample, making sure that large pieces do not fall off during sampling; use the same shovel to collect all samples.

(iii) You must transfer all samples to a clean plastic bag for further processing.

(d) You must prepare each composite sample according to the procedures in paragraphs (d)(1) through (7) of this section.

(1) You must thoroughly mix and pour the entire composite sample over a clean plastic sheet.

(2) You must break large sample pieces (e.g., larger than 3 inches) into smaller sizes.

(3) You must make a pie shape with the entire composite sample and subdivide it into four equal parts.

(4) You must separate one of the quarter samples as the first subset.

(5) If this subset is too large for grinding, you must repeat the procedure in paragraph (d)(3) of this section with the quarter sample and obtain a one-quarter subset from this sample.

(6) You must grind the sample in a mill.

(7) You must use the procedure in paragraph (d)(3) of this section to obtain a one-quarter subsample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

(e) You must determine the concentration of pollutants in the fuel (mercury and/or chlorine and/or TSM) in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 6 to this subpart, for use in Equations 7, 8, and 9 of this subpart.

(f) To demonstrate that a gaseous fuel other than natural gas or refinery gas qualifies as an other gas 1 fuel, as defined in § 63.7575, you must conduct a fuel specification analyses for mercury according to the procedures in paragraphs (g) through (i) of this section and Table 6 to this subpart, as applicable, except as specified in paragraph (f)(1) through (4) of this section, or as an alternative where fuel specification analysis is not practical, you must measure mercury concentration in the exhaust gas when firing only the gaseous fuel to be demonstrated as an other gas 1 fuel in the boiler or process heater according to the procedures in Table 6 to this subpart.

(1) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for natural gas or refinery gas.

(2) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gaseous fuels that are subject to another subpart of this part, part 60, part 61, or part 65.

(3) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section on gaseous fuels for units that are complying with the limits for units designed to burn gas 2 (other) fuels.

(4) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gas streams directly derived from natural gas at natural gas production sites or natural gas plants.

(g) You must develop a site-specific fuel analysis plan for other gas 1 fuels according to the following procedures and requirements in paragraphs (g)(1) and (2) of this section.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in § 63.7510.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all gaseous fuel types other than those exempted from fuel specification analysis under (f)(1) through (3) of this section anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the identification of whether you or a fuel supplier will be conducting the fuel specification analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the samples if your procedures are different from the sampling methods contained in Table 6 to this subpart. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types. If multiple boilers or process heaters are fueled by a common fuel stream it is permissible to conduct a single gas specification at the common point of gas distribution.

(iv) For each anticipated fuel type, the analytical methods from Table 6 to this subpart, with the expected minimum detection levels, to be used for the measurement of mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 to this subpart shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart. When using a fuel supplier's fuel analysis, the owner or operator is not required to submit the information in § 63.7521(g)(2)(iii).

(h) You must obtain a single fuel sample for each fuel type for fuel specification of gaseous fuels.

(i) You must determine the concentration in the fuel of mercury, in units of microgram per cubic meter, dry basis, of each sample for each other gas 1 fuel type according to the procedures in Table 6 to this subpart.

[78 FR 7167, Jan. 31, 2013, as amended at 80 FR 72808, Nov. 20, 2015; 87 FR 60842, Oct. 6, 2022]

§ 63.7522 Can I use emissions averaging to comply with this subpart?

(a) As an alternative to meeting the requirements of § 63.7500 for PM (or TSM), HCl, or mercury on a boiler or process heater-specific basis, if you have more than one existing boiler or process heater in any subcategories located at your facility, you may demonstrate compliance by emissions averaging, if your averaged emissions are not more than 90 percent of the applicable emission limit, according to the procedures in this section. You may not include new boilers or process heaters in an emissions average.

(b) For a group of two or more existing boilers or process heaters in the same subcategory that each vent to a separate stack, you may average PM (or TSM), HCl, or mercury emissions among existing units to demonstrate compliance with the limits in Table 2 or 15 to this subpart as specified in paragraphs (b)(1) through (3) of this section, if you satisfy the requirements in paragraphs (c) through (g) of this section.

(1) You may average units using a CEMS or PM CPMS for demonstrating compliance.

(2) For mercury and HCl, averaging is allowed as follows:

(i) You may average among units in any of the solid fuel subcategories.

(ii) You may average among units in any of the liquid fuel subcategories.

(iii) You may average among units in a subcategory of units designed to burn gas 2 (other) fuels.

(iv) You may not average across the units designed to burn liquid, units designed to burn solid fuel, and units designed to burn gas 2 (other) subcategories.

(3) For PM (or TSM), averaging is only allowed between units within each of the following subcategories and you may not average across subcategories:

(i) Units designed to burn coal/solid fossil fuel.

(ii) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solids.

(iii) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solids.

(iv) Fluidized bed units designed to burn biomass/bio-based solid.

(v) Suspension burners designed to burn biomass/bio-based solid.

(vi) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(vii) Fuel Cells designed to burn biomass/bio-based solid.

(viii) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(ix) Units designed to burn heavy liquid fuel.

(x) Units designed to burn light liquid fuel.

(xi) Units designed to burn liquid fuel that are non-continental units.

(xii) Units designed to burn gas 2 (other) gases.

(c) For each existing boiler or process heater in the averaging group, the emission rate achieved during the initial compliance test for the HAP being averaged must not exceed the emission level that was being achieved on April 1, 2013 or the control technology employed during the initial compliance test must not be less effective for the HAP being averaged than the control technology employed on April 1, 2013.

(d) The averaged emissions rate from the existing boilers and process heaters participating in the emissions averaging option must not exceed 90 percent of the limits in Table 2 or 15 to this subpart at all times the affected units are subject to numeric emission limits following the compliance date specified in § 63.7495.

(e) You must demonstrate initial compliance according to paragraph (e)(1) or (2) of this section using the maximum rated heat input capacity or maximum steam generation capacity of each unit and the results of the initial performance tests or fuel analysis.

(1) You must use Equation 1a or 1b or 1c to this paragraph (e)(1) to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option for that pollutant do not exceed the emission limits in Table 2 or 15 to this subpart. Use Equation 1a if you are complying with the emission limits on a heat input basis, use Equation 1b if you are complying with the emission limits on a steam generation (output) basis, and use Equation 1c if you are complying with the emission limits on a electric generation (output) basis.

Equation 1a to paragraph (e)(1)

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} \left(Er \times Hm \right) \div \sum_{i=1}^{n} Hm \qquad \text{(Eq.1a)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c).

Hm = Maximum rated heat input capacity of unit, i, in units of million Btu per hour.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

Equation 1b to paragraph (e)(1)

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} \left(Er \times So \right) \div \sum_{i=1}^{n} So \qquad \text{(Eq.1b)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c). If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, Eadj, determined according to § 63.7533 for that unit.

So = Maximum steam output capacity of unit, i, in units of million Btu per hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

Equation 1c to paragraph (e)(1)

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Eo) \div \sum_{i=1}^{n} Eo \qquad \text{(Eq. 1c)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c). If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, Eadj, determined according to § 63.7533 for that unit.

Eo = Maximum electric generating output capacity of unit, i, in units of megawatt hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of determining the maximum rated heat input capacity of one or more boilers that generate steam, you may use Equation 2 to this paragraph (e)(2) as an alternative to using Equation 1a of paragraph (e)(1) of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option do not exceed the emission limits for that pollutant in Table 2 or 15 to this subpart that are in pounds per million Btu of heat input.

Equation 2 to paragraph (e)(2)

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Sm \times Cfi) \div \sum_{i=1}^{n} (Sm \times Cfi) \qquad \text{(Eq. 2)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c).

Sm = Maximum steam generation capacity by unit, i, in units of pounds per hour.

Cfi = Conversion factor, calculated from the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for unit, i.

1.1 = Required discount factor.

(f) After the initial compliance demonstration described in paragraph (e) of this section, you must demonstrate compliance on a monthly basis determined at the end of every month (12 times per year) according to paragraphs (f)(1) through (3) of this section. The first monthly period begins on the compliance date specified in § 63.7495. If the affected source elects to collect monthly data for up the 11 months preceding the first monthly period, these additional data points can be used to compute the 12-month rolling average in paragraph (f)(3) of this section.

(1) For each calendar month, you must use Equation 3a or 3b or 3c of this section to calculate the average weighted emission rate for that month. Use Equation 3a and the actual heat input for the month for each existing unit participating in the emissions averaging option if you are complying with emission limits on a heat input basis. Use Equation 3b and the actual steam generation for the month if you are complying with the emission limits on a steam generation (output) basis. Use Equation 3c and the actual electrical generation for the month if you are complying with the emission limits on an electrical generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Hb) \div \sum_{i=1}^{n} Hb \qquad \texttt{(Eq. 3a)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Hb = The heat input for that calendar month to unit, i, in units of million Btu.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times So) \div \sum_{i=1}^{n} So \qquad \texttt{(Eq. 3b)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, E_{adj}, determined according to § 63.7533 for that unit.

So = The steam output for that calendar month from unit, i, in units of million Btu, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} \left(Er \times Eo\right) \div \sum_{i=1}^{n} Eo \quad \text{(Eq. 3c)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, E_{adj}, determined according to § 63.7533 for that unit.

Eo = The electric generating output for that calendar month from unit, i, in units of megawatt hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of monitoring heat input, you may use Equation 4 of this section as an alternative to using Equation 3a of this section to calculate the average weighted emission rate using the actual steam generation from the boilers participating in the emissions averaging option.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} \left(Er \times Sa \times Cfi\right) \div \sum_{i=1}^{n} \left(Sa \times Cfi\right) \quad \text{(Eq. 4)}$$

Where:

AveWeightedEmissions = average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Sa = Actual steam generation for that calendar month by boiler, i, in units of pounds.

Cfi = Conversion factor, as calculated during the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for boiler, i.

1.1 = Required discount factor.

(3) Until 12 monthly weighted average emission rates have been accumulated, calculate and report only the average weighted emission rate determined under paragraph (f)(1) or (2) of this section for each calendar month.

After 12 monthly weighted average emission rates have been accumulated, for each subsequent calendar month, use Equation 5 of this section to calculate the 12-month rolling average of the monthly weighted average emission rates for the current calendar month and the previous 11 calendar months.

$$Eavg = \sum_{i=1}^{n} ERi \div 12 \quad \text{(Eq. 5)}$$

Where:

Eavg = 12-month rolling average emission rate, (pounds per million Btu heat input)

ERi = Monthly weighted average, for calendar month “i” (pounds per million Btu heat input), as calculated by paragraph (f)(1) or (2) of this section.

(g) You must develop, and submit upon request to the applicable Administrator for review and approval, an implementation plan for emission averaging according to the following procedures and requirements in paragraphs (g)(1) through (4) of this section.

(1) If requested, you must submit the implementation plan no later than 180 days before the date that the facility intends to demonstrate compliance using the emission averaging option.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vii) of this section in your implementation plan for all emission sources included in an emissions average:

(i) The identification of all existing boilers and process heaters in the averaging group, including for each either the applicable HAP emission level or the control technology installed as of January 31, 2013 and the date on which you are requesting emission averaging to commence;

(ii) The process parameter (heat input or steam generated) that will be monitored for each averaging group;

(iii) The specific control technology or pollution prevention measure to be used for each emission boiler or process heater in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple boilers or process heaters, the owner or operator must identify each boiler or process heater;

(iv) The test plan for the measurement of PM (or TSM), HCl, or mercury emissions in accordance with the requirements in § 63.7520;

(v) The operating parameters to be monitored for each control system or device consistent with § 63.7500 and Table 4, and a description of how the operating limits will be determined;

(vi) If you request to monitor an alternative operating parameter pursuant to § 63.7525, you must also include:

(A) A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); and

(B) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device; the frequency and content of monitoring, reporting, and recordkeeping requirements; and a demonstration, to the satisfaction of the Administrator, that the proposed monitoring frequency is sufficient to represent control device operating conditions; and

(vii) A demonstration that compliance with each of the applicable emission limit(s) will be achieved under representative operating load conditions. Following each compliance demonstration and until the next compliance demonstration, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(3) If submitted upon request, the Administrator shall review and approve or disapprove the plan according to the following criteria:

(i) Whether the content of the plan includes all of the information specified in paragraph (g)(2) of this section; and

(ii) Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.

(4) The applicable Administrator shall not approve an emission averaging implementation plan containing any of the following provisions:

(i) Any averaging between emissions of differing pollutants or between differing sources; or

(ii) The inclusion of any emission source other than an existing unit in the same subcategories.

(h) For a group of two or more existing affected units, each of which vents through a single common stack, you may average PM (or TSM), HCl, or mercury emissions to demonstrate compliance with the limits for that pollutant in Table 2 or 15 to this subpart if you satisfy the requirements in paragraph (i) or (j) of this section.

(i) For a group of two or more existing units in the same subcategory, each of which vents through a common emissions control system to a common stack, that does not receive emissions from units in other subcategories or categories, you may treat such averaging group as a single existing unit for purposes of this subpart and comply with the requirements of this subpart as if the group were a single unit.

(j) For all other groups of units subject to the common stack requirements of paragraph (h) of this section, including situations where the exhaust of affected units are each individually controlled and then sent to a common stack, the owner or operator may elect to:

(1) Conduct performance tests according to procedures specified in § 63.7520 in the common stack if affected units from other subcategories vent to the common stack. The emission limits that the group must comply with are determined by the use of Equation 6 to this paragraph (j)(1).

Equation 6 to paragraph (j)(1)

$$En = \sum_{i=1}^{n} (ELi \times Hi) \div \sum_{i=1}^{n} Hi \qquad \text{(Eq. 6)}$$

Where:

En = HAP emission limit, pounds per million British thermal units (lb/MMBtu) or parts per million (ppm).

ELi = Appropriate emission limit from Table 2 or 15 to this subpart for unit i, in units of lb/MMBtu or ppm.

Hi = Heat input from unit i, MMBtu.

(2) Conduct performance tests according to procedures specified in § 63.7520 in the common stack. If affected units and non-affected units vent to the common stack, the non-affected units must be shut down or vented to a different stack during the performance test unless the facility determines to demonstrate compliance with the non-affected units venting to the stack; and

(3) Meet the applicable operating limit specified in § 63.7540 and Table 8 to this subpart for each emissions control system (except that, if each unit venting to the common stack has an applicable opacity operating limit, then a single continuous opacity monitoring system may be located in the common stack instead of in each duct to the common stack).

(k) The common stack of a group of two or more existing boilers or process heaters in the same subcategories subject to paragraph (h) of this section may be treated as a separate stack for purposes of paragraph (b) of this section and included in an emissions averaging group subject to paragraph (b) of this section.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7168, Jan. 31, 2013; 80 FR 72809, Nov. 20, 2015; 87 FR 60843, Oct. 6, 2022]

§ 63.7525 What are my monitoring, installation, operation, and maintenance requirements?

(a) If your boiler or process heater is subject to a CO emission limit in Table 1 or 2 or Tables 11 through 15 to this subpart, you must install, operate, and maintain an oxygen analyzer system, as defined in § 63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen (O_2) (or carbon dioxide (CO_2)) according to the procedures in paragraphs (a)(1) through (6) of this section.

(1) Install the CO CEMS including an O_2 (or CO_2) analyzer by the compliance date specified in § 63.7495. The CO and O_2 (or CO_2) levels shall be monitored at the same location at the outlet of the boiler or process heater. An owner or operator may determine compliance with the CO emissions limit using a CO_2 analyzer as the diluent monitor. If a CO_2 analyzer is used as the diluent monitor, EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, for the fuel type(s) being burned in the unit and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to calculate the emissions corrected to 3 percent O_2 using the measured CO_2 percentage, and must also take into account that the 3 percent oxygen correction is to be done on a dry basis. The equations used to calculate the emissions, must also account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. The methodology used to calculate the CO emissions and the methodology used to account for any CO_2 being added to, or removed from the emissions gas stream shall be detailed and approved in the site-specific monitoring plan developed according to § 63.7505(d).

(2) To demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Table 1 or 2 or Tables 11 through 15 to this subpart, you must install, certify, operate, and maintain a CO CEMS and an oxygen analyzer according to the applicable procedures under Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B; part 75 of this chapter (if an CO_2 analyzer is used); the site-specific monitoring plan developed according to § 63.7505(d); and the requirements in § 63.7540(a)(8) and this paragraph (a). Any boiler or process heater that has a CO CEMS that is compliant with Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, a site-specific monitoring plan developed according to § 63.7505(d), and the requirements in § 63.7540(a)(8) and this paragraph (a) must use the CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Table 1 or 2 or Tables 11 through 15 to this subpart.

(i) You must conduct a performance evaluation of each CO CEMS according to the requirements in § 63.8(e) and according to Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B.

(ii) During each relative accuracy test run of the CO CEMS, you must collect emission data for CO concurrently using both the CO CEMS and Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4. The relative accuracy testing must be conducted at representative operating conditions.

(iii) You must follow the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of Procedure 1 of appendix F to part 60. The measurement span value of the CO CEMS must be two times the applicable CO emission limit, expressed as a concentration.

(iv) Any CO CEMS that does not comply with this paragraph (a) cannot be used to meet any requirement in this subpart to demonstrate compliance with a CO emission limit listed in Table 1 or 2 or Tables 11 through 15 to this subpart.

(v) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(vi) When CO_2 is used to correct CO emissions and CO_2 is measured on a wet basis, if needed, correct for moisture as follows: Install, operate, maintain, and quality assure a continuous moisture monitoring system for measuring and recording the moisture content of the flue gases, in order to correct the measured hourly volumetric flow rates for moisture when calculating CO concentrations. The following continuous moisture monitoring systems are acceptable: a continuous moisture sensor; an oxygen analyzer (or analyzers) capable of measuring O_2 both on a wet basis and on a dry basis; or a stack temperature sensor and a moisture look-up table, *i.e.,* a psychrometric chart (for saturated gas streams following wet scrubbers or other demonstrably saturated gas streams, only). The moisture monitoring system shall include as a component the automated data acquisition and handling system (DAHS) for recording and reporting both the raw data (e.g., hourly average wet-and dry-basis O_2 values) and the hourly average values of the stack gas moisture content derived from those data. When a moisture look-up table is used, the moisture monitoring system shall be represented as a single component, the certified DAHS, in the monitoring plan for the unit or common stack.

(3) Complete a minimum of one cycle of CO and oxygen (or CO_2) CEMS operation (sampling, analyzing, and data recording) for each successive 15-minute period. Collect CO and oxygen (or CO_2) data concurrently. Collect at least four CO and oxygen (or CO_2) CEMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CEMS calibration, quality assurance, or maintenance activities are being performed.

(4) Reduce the CO CEMS data as specified in § 63.8(g)(2).

(5) Calculate one-hour arithmetic averages, corrected to 3 percent oxygen (or corrected to an CO_2 percentage determined to be equivalent to 3 percent oxygen) from each hour of CO CEMS data in parts per million CO concentration. The one-hour arithmetic averages required shall be used to calculate the 30-day or 10-day rolling average emissions. Use Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7 for calculating the average CO concentration from the hourly values.

(6) For purposes of collecting CO data, operate the CO CEMS as specified in § 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in § 63.7535(c). Periods when CO data are unavailable may constitute monitoring deviations as specified in § 63.7535(d).

(7) Operate an oxygen trim system with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test as the operating limit for oxygen according to Table 7 to this subpart.

(b) If your boiler or process heater is in the unit designed to burn coal/solid fossil fuel subcategory or the unit designed to burn heavy liquid subcategory and has an average annual heat input rate greater than 250 MMBtu per hour from solid fossil fuel and/or heavy liquid, and you demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (b)(1) through (4) of this section. As an alternative to use of a PM CPMS to demonstrate compliance with the PM limit, you may choose to use a PM CEMS. If you choose to use a PM CEMS to demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CEMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraph (b)(5) through (8) of this section. For other boilers or process heaters, you may elect to use a PM CPMS or PM CEMS operated in accordance with this section in lieu of using other CMS for monitoring PM compliance (*e.g.,* bag leak detectors, ESP secondary power, and PM scrubber pressure). Owners of boilers and process heaters who elect to comply with the alternative TSM limit are not required to install a PM CPMS.

(1) Install, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of PM in the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS must be expressed as milliamps.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must have a documented detection limit of 0.5 milligram per actual cubic meter, or less.

(2) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Collect PM CPMS hourly average output data for all boiler or process heater operating hours except as indicated in § 63.7535(a) through (d). Express the PM CPMS output as milliamps.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output data collected during all boiler or process heater operating hours (milliamps).

(5) Install, certify, operate, and maintain your PM CEMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(5)(i) through (iv) of this section.

(i) You shall conduct a performance evaluation of the PM CEMS according to the applicable requirements of § 60.8(e), and Performance Specification 11 at 40 CFR part 60, appendix B of this chapter.

(ii) During each PM correlation testing run of the CEMS required by Performance Specification 11 at 40 CFR part 60, appendix B of this chapter, you shall collect PM and oxygen (or carbon dioxide) data concurrently (or within a 30-to 60-minute period) by both the CEMS and conducting performance tests using Method 5 at 40 CFR part 60, appendix A-3 or Method 17 at 40 CFR part 60, appendix A-6 of this chapter.

(iii) You shall perform quarterly accuracy determinations and daily calibration drift tests in accordance with Procedure 2 at 40 CFR part 60, appendix F of this chapter. You must perform Relative Response Audits annually and perform Response Correlation Audits every 3 years.

(iv) Within 60 days after the date of completing each CEMS relative accuracy test audit or performance test conducted to demonstrate compliance with this subpart, you must submit the relative accuracy test audit data and performance test data to the EPA by successfully submitting the data electronically into the EPA's Central Data Exchange by using the Electronic Reporting Tool (see *http://www.epa.gov/ttn/chief/ert/erttool.html/*).

(6) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(7) Collect PM CEMS hourly average output data for all boiler or process heater operating hours except as indicated in § 63.7535(a) through (d).

(8) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all boiler or process heater operating hours.

(c) If you have an applicable opacity operating limit in this rule, and are not otherwise required or elect to install and operate a PM CPMS, PM CEMS, or a bag leak detection system, you must install, operate, certify and maintain each COMS according to the procedures in paragraphs (c)(1) through (7) of this section by the compliance date specified in § 63.7495.

(1) Each COMS must be installed, operated, and maintained according to Performance Specification 1 at appendix B to part 60 of this chapter.

(2) You must conduct a performance evaluation of each COMS according to the requirements in § 63.8(e) and according to Performance Specification 1 at appendix B to part 60 of this chapter.

(3) As specified in § 63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in § 63.8(g)(2).

(5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in § 63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of § 63.8(e). You must identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit. Any 6-minute period for which the monitoring system is out of control and data are not available for a required calculation constitutes a deviation from the monitoring requirements.

(7) You must determine and record all the 6-minute averages (and daily block averages as applicable) collected for periods during which the COMS is not out of control.

(d) If you have an operating limit that requires the use of a CMS other than a PM CPMS or COMS, you must install, operate, and maintain each CMS according to the procedures in paragraphs (d)(1) through (5) of this section by the compliance date specified in § 63.7495.

(1) The CPMS must complete a minimum of one cycle of operation every 15-minutes. You must have a minimum of four successive cycles of operation, one representing each of the four 15-minute periods in an hour, to have a valid hour of data.

(2) You must operate the monitoring system as specified in § 63.7535(b), and comply with the data calculation requirements specified in § 63.7535(c).

(3) Any 15-minute period for which the monitoring system is out-of-control and data are not available for a required calculation constitutes a deviation from the monitoring requirements. Other situations that constitute a monitoring deviation are specified in § 63.7535(d).

(4) You must determine the 30-day rolling average of all recorded readings, except as provided in § 63.7535(c).

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

(e) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (d) and (e)(1) through (4) of this section.

(1) You must install the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) You must use a flow sensor with a measurement sensitivity of no greater than 2 percent of the design flow rate.

(3) You must minimize, consistent with good engineering practices, the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) You must conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(f) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (d) and (f)(1) through (6) of this section.

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (*e.g.*, PM scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion consistent with good engineering practices.

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (*e.g.*, check for pressure tap pluggage daily).

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in you monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(g) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (d) and (g)(1) through (4) of this section.

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

(2) Ensure the sample is properly mixed and representative of the fluid to be measured.

(3) Calibrate the pH monitoring system in accordance with your monitoring plan and according to the manufacturer's instructions. Clean the pH probe at least once each process operating day. Maintain on-site documentation that your calibration frequency is sufficient to maintain the specified accuracy of your device.

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(h) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator (ESP) operated with a wet scrubber, you must meet the requirements in paragraphs (h)(1) and (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates.

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(i) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (d) and (i)(1) through (2) of this section.

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(j) If you are not required to use a PM CPMS and elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate the bag leak detection system as specified in paragraphs (j)(1) through (6) of this section.

(1) You must install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute PM loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.

(2) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see § 63.14).

(3) Use a bag leak detection system certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) Use a bag leak detection system equipped with a device to record continuously the output signal from the sensor.

(5) Use a bag leak detection system equipped with a system that will alert plant operating personnel when an increase in relative PM emissions over a preset level is detected. The alert must easily recognizable (e.g., heard or seen) by plant operating personnel.

(6) Where multiple bag leak detectors are required, the system's instrumentation and alert may be shared among detectors.

(k) For each unit that meets the definition of limited-use boiler or process heater, you must keep fuel use records for the days the boiler or process heater was operating.

(l) For each unit for which you decide to demonstrate compliance with the mercury or HCl emissions limits in Table 1 or 2 or Tables 11 through 15 to this subpart by use of a CEMS for mercury or HCl, you must install, certify, maintain, and operate a CEMS measuring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (l)(1) through (8) of this section. For HCl, this option for an affected unit takes effect on the date of approval of a site-specific monitoring plan.

(1) Notify the Administrator one month before starting use of the CEMS, and notify the Administrator one month before stopping use of the CEMS.

(2) Each CEMS shall be installed, certified, operated, and maintained according to the requirements in § 63.7540(a)(14) for a mercury CEMS and § 63.7540(a)(15) for a HCl CEMS.

(3) For a new unit, you must complete the initial performance evaluation of the CEMS by the latest of the dates specified in paragraph (l)(3)(i) through (iii) of this section.

(i) No later than July 30, 2013.

(ii) No later 180 days after the date of initial startup.

(iii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(4) For an existing unit, you must complete the initial performance evaluation by the latter of the two dates specified in paragraph (l)(4)(i) and (ii) of this section.

(i) No later than July 29, 2016.

(ii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(5) Compliance with the applicable emissions limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emissions rates using the continuous monitoring system outlet data. The 30-day rolling arithmetic average emission rate (lb/MMBtu) shall be calculated using the equations in EPA Reference Method 19 at 40 CFR part 60, appendix A-7, but substituting the mercury or HCl concentration for the pollutant concentrations normally used in Method 19.

(6) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis. Collect at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

(7) The one-hour arithmetic averages required shall be expressed in lb/MMBtu and shall be used to calculate the boiler 30-day and 10-day rolling average emissions.

(8) You are allowed to substitute the use of the PM, mercury or HCl CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with the PM, mercury or HCl emissions limit, and if you are using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, you are allowed to substitute the use of a sulfur dioxide (SO_2) CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with HCl emissions limit.

(m) If your unit is subject to a HCl emission limit in Table 1 or 2 or Tables 11 through 15 to this subpart and you have an acid gas wet scrubber or dry sorbent injection control technology and you elect to use an SO_2 CEMS to demonstrate continuous compliance with the HCl emission limit, you must install the monitor at the outlet of the boiler or process heater, downstream of all emission control devices, and you must install, certify, operate, and maintain the CEMS according to either part 60 or part 75 of this chapter.

(1) The SO_2 CEMS must be installed by the compliance date specified in § 63.7495.

(2) For on-going quality assurance (QA), the SO_2 CEMS must meet either the applicable daily and quarterly requirements in Procedure 1 of appendix F of part 60 or the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: You must perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the SO_2 CEMS has a span value of 30 ppm or less.

(3) For a new unit, the initial performance evaluation shall be completed no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, the initial performance evaluation shall be completed no later than July 29, 2016.

(4) For purposes of collecting SO_2 data, you must operate the SO_2 CEMS as specified in § 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in § 63.7535(c). Periods when SO_2 data are unavailable may constitute monitoring deviations as specified in § 63.7535(d).

(5) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis.

(6) Use only unadjusted, quality-assured SO_2 concentration values in the emissions calculations; do not apply bias adjustment factors to the part 75 SO_2 data and do not use part 75 substitute data values.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7171, Jan. 31, 2013; 80 FR 72810, Nov. 20, 2015; 87 FR 60844, Oct. 6, 2022]

§ 63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests and fuel analyses and establishing operating limits, as applicable, according to § 63.7520, paragraphs (b) and (c) of this section, and Tables 5 and 7 to this subpart. The requirement to conduct a fuel analysis is not applicable for units that burn a single type of fuel, as specified by § 63.7510(a)(2). If applicable, you must also install, operate, and maintain all applicable CMS (including CEMS, COMS, and CPMS) according to § 63.7525.

(b) If you demonstrate compliance through performance stack testing, you must establish each site-specific operating limit in Table 4 to this subpart that applies to you according to the requirements in § 63.7520, Table 7 to this subpart, and paragraph (b)(4) of this section, as applicable. You must also conduct fuel analyses according to § 63.7521 and establish maximum fuel pollutant input levels according to paragraphs (b)(1) through (3) of this section, as applicable, and as specified in § 63.7510(a)(2). (Note that § 63.7510(a)(2) exempts certain fuels from the fuel analysis requirements.) However, if you switch fuel(s) and cannot show that the new fuel(s) does (do) not increase the chlorine, mercury, or TSM input into the unit through the results of fuel analysis, then you must repeat the performance test to demonstrate compliance while burning the new fuel(s).

(1) You must establish the maximum chlorine fuel input (Clinput) during the initial fuel analysis according to the procedures in paragraphs (b)(1)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of chlorine.

(ii) During the fuel analysis for hydrogen chloride, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of chlorine, and the average chlorine concentration of each fuel type burned (Ci).

(iii) You must establish a maximum chlorine input level using Equation 7 of this section.

$$Clinput = \sum_{i=1}^{n} \left(Ci \times Qi \right) \quad \text{(Eq. 7)}$$

Where:

Clinput = Maximum amount of chlorine entering the boiler or process heater through fuels burned in units of pounds per million Btu.

Ci = Arithmetic average concentration of chlorine in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

(2) You must establish the maximum mercury fuel input level (Mercuryinput) during the initial fuel analysis using the procedures in paragraphs (b)(2)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of mercury.

(ii) During the compliance demonstration for mercury, you must determine the fraction of total heat input for each fuel burned (Qi) based on the fuel mixture that has the highest content of mercury, and the average mercury concentration of each fuel type burned (HGi).

(iii) You must establish a maximum mercury input level using Equation 8 of this section.

$$Mercuryinput = \sum_{i=1}^{n} (HGi \times Qi) \qquad \text{(Eq. 8)}$$

Where:

Mercuryinput = Maximum amount of mercury entering the boiler or process heater through fuels burned in units of pounds per million Btu.

HGi = Arithmetic average concentration of mercury in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content during the initial compliance test. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of “1” for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of mercury.

(3) If you opt to comply with the alternative TSM limit, you must establish the maximum TSM fuel input (TSMinput) for solid or liquid fuels during the initial fuel analysis according to the procedures in paragraphs (b)(3)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of TSM.

(ii) During the fuel analysis for TSM, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of TSM, and the average TSM concentration of each fuel type burned (TSMi).

(iii) You must establish a maximum TSM input level using Equation 9 of this section.

$$TSMinput = \sum_{i=1}^{n} (TSMi \times Qi) \qquad \text{(Eq. 9)}$$

Where:

TSMinput = Maximum amount of TSM entering the boiler or process heater through fuels burned in units of pounds per million Btu.

TSMi = Arithmetic average concentration of TSM in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of TSM during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of “1” for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(4) You must establish parameter operating limits according to paragraphs (b)(4)(i) through (ix) of this section. As indicated in Table 4 to this subpart, you are not required to establish and comply with the operating parameter limits when you are using a CEMS to monitor and demonstrate compliance with the applicable emission limit for that control device parameter.

(i) For a wet acid gas scrubber, you must establish the minimum scrubber effluent pH and liquid flow rate as defined in § 63.7575, as your operating limits during the performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for HCl and mercury emissions, you must establish one set of minimum scrubber effluent pH, liquid flow rate, and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate operating limit at the higher of the minimum values established during the performance tests.

(ii) For any particulate control device (e.g., ESP, particulate wet scrubber, fabric filter) for which you use a PM CPMS, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (b)(4)(ii)(A) through (F) of this section.

(A) Determine your operating limit as the average PM CPMS output value recorded during the most recent performance test run demonstrating compliance with the filterable PM emission limit or at the PM CPMS output value corresponding to 75 percent of the emission limit if your PM performance test demonstrates compliance below 75 percent of the emission limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(*1*) Your PM CPMS must provide a 4-20 milliamp output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps.

(*2*) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit.

(*3*) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

(B) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in paragraphs (b)(4)(ii)(B)(*1*) through (*4*) of this section.

(*1*) Determine your instrument zero output with one of the following procedures:

(*i*) Zero point data for *in-situ* instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

(*ii*) Zero point data for *extractive* instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

(*iii*) The zero point may also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

(*iv*) If none of the steps in paragraphs (b)(4)(ii)(B)(*1*)(*i*) through (*iii*) of this section are possible, you must use a zero output value provided by the manufacturer.

(*2*) Determine your PM CPMS instrument average in milliamps, and the average of your corresponding three PM compliance test runs, using equation 10.

$$\bar{x} = \frac{1}{n}\sum_{t=1}^{n} X_1 \bar{y} = \frac{1}{n}\sum_{t=1}^{n} Y_1 \qquad \text{(Eq. 10)}$$

Where:

X_1 = the PM CPMS data points for the three runs constituting the performance test,

Y_1 = the PM concentration value for the three runs constituting the performance test, and

n = the number of data points.

(*3*) With your instrument zero expressed in milliamps, your three run average PM CPMS milliamp value, and your three run average PM concentration from your three compliance tests, determine a relationship of lb/MMBtu per milliamp with equation 11.

$$R = \frac{Y_1}{(X_1 - z)} \qquad \text{(Eq. 11)}$$

Where:

R = the relative lb/MMBtu per milliamp for your PM CPMS,

Y_1 = the three run average lb/MMBtu PM concentration,

X_1 = the three run average milliamp output from you PM CPMS, and

z = the milliamp equivalent of your instrument zero determined from (B)(i).

(*4*) Determine your source specific 30-day rolling average operating limit using the lb/MMBtu per milliamp value from Equation 11 in equation 12, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit.

$$O_l = z + \frac{0.75(L)}{R} \qquad \text{(Eq. 12)}$$

Where:

O_l = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps.

L = your source emission limit expressed in lb/MMBtu,

z = your instrument zero in milliamps, determined from (B)(i), and

R = the relative lb/MMBtu per milliamp for your PM CPMS, from Equation 11.

(C) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your 30-day rolling average operating limit by averaging the PM CPMS milliamp output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 13 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (b)(4)(ii)(F) of this section.

$$O_h = \frac{1}{n}\sum_{t=1}^{n} X_1 \qquad \text{(Eq. 13)}$$

Where:

X_1 = the PM CPMS data points for all runs i,

n = the number of data points, and

O_h = your site specific operating limit, in milliamps.

(D) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new operating hour. Use Equation 14 to determine the 30-day rolling average.

$$30\text{-day} = \frac{\sum_{i=1}^{n} Hpvi}{n} \qquad \text{(Eq. 14)}$$

Where:

30-day = 30-day average.

Hpvi = is the hourly parameter value for hour i

n = is the number of valid hourly parameter values collected over the previous 30 operating days.

(E) Use EPA Method 5 of appendix A to part 60 of this chapter to determine PM emissions. For each performance test, conduct three separate runs under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. Conduct each test run to collect a minimum sample volume specified in Table 1 or 2 or Tables 11 through 15 to this subpart, as applicable, for determining compliance with a new source limit or an existing source limit. Calculate the average of the results from three runs to determine compliance. You need not determine the PM collected in the impingers ("back half") of the Method 5 particulate sampling train to demonstrate compliance with the PM standards in this subpart. This shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes.

(F) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (*e.g.* beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run.

(iii) For a particulate wet scrubber, you must establish the minimum pressure drop and liquid flow rate as defined in § 63.7575, as your operating limits during the three-run performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for PM and TSM emissions, you must establish one set of minimum scrubber liquid flow rate and pressure drop operating limits. If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests.

(iv) For an electrostatic precipitator (ESP) operated with a wet scrubber, you must establish the minimum total secondary electric power input, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit. (These operating limits do not apply to ESP that are operated as dry controls without a wet scrubber.)

(v) For a dry scrubber, you must establish the minimum sorbent injection rate for each sorbent, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vi) For activated carbon injection, you must establish the minimum activated carbon injection rate, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vii) The operating limit for boilers or process heaters with fabric filters that demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in § 63.7525, and that each fabric filter must be operated such that the bag leak detection system alert is not activated more than 5 percent of the operating time during a 6-month period.

(viii) For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests.

(ix) The operating limit for boilers or process heaters that demonstrate continuous compliance with the HCl emission limit using a SO_2 CEMS is to install and operate the SO_2 according to the requirements in § 63.7525(m) establish a maximum SO_2 emission rate equal to the highest hourly average SO_2 measurement during the most recent three-run performance test for HCl.

(c) If you elect to demonstrate compliance with an applicable emission limit through fuel analysis, you must conduct fuel analyses according to § 63.7521 and follow the procedures in paragraphs (c)(1) through (5) of this section.

(1) If you burn more than one fuel type, you must determine the fuel mixture you could burn in your boiler or process heater that would result in the maximum emission rates of the pollutants that you elect to demonstrate compliance through fuel analysis.

(2) You must determine the 90th percentile confidence level fuel pollutant concentration of the composite samples analyzed for each fuel type using the one-sided t-statistic test described in Equation 15 of this section.

$$P90 = mean + (SD \times t) \qquad \text{(Eq. 15)}$$

Where:

P90 = 90th percentile confidence level pollutant concentration, in pounds per million Btu.

Mean = Arithmetic average of the fuel pollutant concentration in the fuel samples analyzed according to § 63.7521, in units of pounds per million Btu.

SD = Standard deviation of the mean of pollutant concentration in the fuel samples analyzed according to § 63.7521, in units of pounds per million Btu. SD is calculated as the sample standard deviation divided by the square root of the number of samples.

t = t distribution critical value for 90th percentile ($t_{0.1}$) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a t-Distribution Critical Value Table.

(3) To demonstrate compliance with the applicable emission limit for HCl, the HCl emission rate that you calculate for your boiler or process heater using Equation 16 of this section must not exceed the applicable emission limit for HCl.

$$HCl = \sum_{i=1}^{n} (Ci90 \times Qi \times 1.028) \qquad \text{(Eq. 16)}$$

Where:

HCl = HCl emission rate from the boiler or process heater in units of pounds per million Btu.

Ci90 = 90th percentile confidence level concentration of chlorine in fuel type, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

1.028 = Molecular weight ratio of HCl to chlorine.

(4) To demonstrate compliance with the applicable emission limit for mercury, the mercury emission rate that you calculate for your boiler or process heater using Equation 17 of this section must not exceed the applicable emission limit for mercury.

$$Mercury = \sum_{i=1}^{n} \left(Hgi90 \times Qi\right) \qquad \text{(Eq. 17)}$$

Where:

Mercury = Mercury emission rate from the boiler or process heater in units of pounds per million Btu.

Hgi90 = 90th percentile confidence level concentration of mercury in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest mercury content.

(5) To demonstrate compliance with the applicable emission limit for TSM for solid or liquid fuels, the TSM emission rate that you calculate for your boiler or process heater from solid fuels using Equation 18 of this section must not exceed the applicable emission limit for TSM.

$$Metals = \sum_{i=1}^{n} \left(TSM90i \times Qi\right) \qquad \text{(Eq. 18)}$$

Where:

Metals = TSM emission rate from the boiler or process heater in units of pounds per million Btu.

TSMi90 = 90th percentile confidence level concentration of TSM in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest TSM content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest TSM content.

(d) [Reserved]

(e) You must include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 to this subpart, and that the assessment is an accurate depiction of your facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.

(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.7545(e).

(g) If you elect to demonstrate that a gaseous fuel meets the specifications of another gas 1 fuel as defined in § 63.7575, you must conduct an initial fuel specification analyses according to § 63.7521(f) through (i) and according to the frequency listed in § 63.7540(c) and maintain records of the results of the testing as outlined in § 63.7555(g). For samples where the initial mercury specification has not been exceeded, you will include a signed certification with the Notification of Compliance Status that the initial fuel specification test meets the gas specification outlined in the definition of other gas 1 fuels.

(h) If you own or operate a unit subject to emission limits in Table 1 or 2 or Tables 11 through 15 to this subpart, you must meet the work practice standard according to Table 3 to this subpart. During startup and shutdown, you must only follow the work practice standards according to items 5 and 6 of Table 3 to this subpart.

(i) If you opt to comply with the alternative SO_2 CEMS operating limit in Tables 4 and 8 to this subpart, you may do so only if your affected boiler or process heater:

(1) Has a system using wet scrubber or dry sorbent injection and SO_2 CEMS installed on the unit; and

(2) At all times, you operate the wet scrubber or dry sorbent injection for acid gas control on the unit consistent with § 63.7500(a)(3); and

(3) You establish a unit-specific maximum SO_2 operating limit by collecting the maximum hourly SO_2 emission rate on the SO_2 CEMS during the paired 3-run test for HCl. The maximum SO_2 operating limit is equal to the highest hourly average SO_2 concentration measured during the HCl performance test.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7174, Jan. 31, 2013; 80 FR 72811, Nov. 20, 2015; 87 FR 60845, Oct. 6, 2022]

§ 63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?

(a) If you elect to comply with the alternative equivalent output-based emission limits, instead of the heat input-based limits listed in Table 2 or 15 to this subpart, and you want to take credit for implementing energy conservation measures identified in an energy assessment, you may demonstrate compliance using efficiency credits according to the procedures in this section. You may use this compliance approach for an existing affected boiler for demonstrating initial compliance according to § 63.7522(e) and for demonstrating monthly compliance according to § 63.7522(f). Owners or operators using this compliance approach must establish an emissions benchmark, calculate and document the efficiency credits, develop an Implementation Plan, comply with the general reporting requirements, and apply the efficiency credit according to the procedures in paragraphs (b) through (f) of this section. You cannot use this compliance approach for a new or reconstructed affected boiler. Additional guidance from the Department of Energy on efficiency credits is available at *https://www.epa.gov/ttn/atw/boiler/boilerpg.html*.

(b) For each existing affected boiler for which you intend to apply emissions credits, establish a benchmark from which emission reduction credits may be generated by determining the actual annual fuel heat input to the affected boiler before initiation of an energy conservation activity to reduce energy demand (*i.e.,* fuel usage) according to paragraphs (b)(1) through (4) of this section. The benchmark shall be expressed in trillion Btu per year heat input.

(1) The benchmark from which efficiency credits may be generated shall be determined by using the most representative, accurate, and reliable process available for the source. The benchmark shall be established for a one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

(2) Determine the starting point from which to measure progress. Inventory all fuel purchased and generated on-site (off-gases, residues) in physical units (MMBtu, million cubic feet, etc.).

(3) Document all uses of energy from the affected boiler. Use the most recent data available.

(4) Collect non-energy related facility and operational data to normalize, if necessary, the benchmark to current operations, such as building size, operating hours, etc. If possible, use actual data that are current and timely rather than estimated data.

(c) Efficiency credits can be generated if the energy conservation measures were implemented after January 1, 2008 and if sufficient information is available to determine the appropriate value of credits.

(1) The following emission points cannot be used to generate efficiency credits:

(i) Energy conservation measures implemented on or before January 1, 2008, unless the level of energy demand reduction is increased after January 1, 2008, in which case credit will be allowed only for change in demand reduction achieved after January 1, 2008.

(ii) Efficiency credits on shut-down boilers. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to energy conservation measures identified in the energy assessment. In this case, the bench established for the affected boiler to which the credits from the shutdown will be applied must be revised to include the benchmark established for the shutdown boiler.

(2) For all points included in calculating emissions credits, the owner or operator shall:

(i) Calculate annual credits for all energy demand points. Use Equation 19 to calculate credits. Energy conservation measures that meet the criteria of paragraph (c)(1) of this section shall not be included, except as specified in paragraph (c)(1)(i) of this section.

(3) Credits are generated by the difference between the benchmark that is established for each affected boiler, and the actual energy demand reductions from energy conservation measures implemented after January 1, 2008. Credits shall be calculated using Equation 19 of this section as follows:

(i) The overall equation for calculating credits is:

$$ECredits = \left(\sum_{i=1}^{n} EIS_{iactual} \right) \div EI_{baseline} \qquad \text{(Eq. 19)}$$

Where:

ECredits = Energy Input Savings for all energy conservation measures implemented for an affected boiler, expressed as a decimal fraction of the baseline energy input.

$EIS_{iactual}$ = Energy Input Savings for each energy conservation measure, i, implemented for an affected boiler, million Btu per year.

$EI_{baseline}$ = Energy Input baseline for the affected boiler, million Btu per year.

n = Number of energy conservation measures included in the efficiency credit for the affected boiler.

(ii) [Reserved]

(d) The owner or operator shall develop, and submit for approval upon request by the Administrator, an Implementation Plan containing all of the information required in this paragraph for all boilers to be included in an efficiency credit approach. The Implementation Plan shall identify all existing affected boilers to be included in applying the efficiency credits. The Implementation Plan shall include a description of the energy conservation measures implemented and the energy savings generated from each measure and an explanation of the criteria used for determining that savings. If requested, you must submit the implementation plan for efficiency credits to the Administrator for review and approval no later than 180 days before the date on which the facility intends to demonstrate compliance using the efficiency credit approach.

(e) The emissions rate as calculated using Equation 20 in paragraph (f) of this section from each existing boiler participating in the efficiency credit option must be in compliance with the limits in Table 2 or 15 to this subpart at all times the affected unit is subject to numeric emission limits, following the compliance date specified in § 63.7495.

(f) You must use Equation 20 of this paragraph (f) to demonstrate initial compliance by demonstrating that the emissions from the affected boiler participating in the efficiency credit compliance approach do not exceed the emission limits in Table 2 or 15 to this subpart.

Equation 20 to paragraph (f)

$$E_{adj} = E_m \times (1 - ECredits) \qquad \text{(Eq. 20)}$$

Where:

E_{adj} = Emission level adjusted by applying the efficiency credits earned, lb per million Btu steam output (or lb per MWh) for the affected boiler.

E_m = Emissions measured during the performance test, lb per million Btu steam output (or lb per MWh) for the affected boiler.

ECredits = Efficiency credits from Equation 19 to paragraph (c)(3)(i) of this section for the affected boiler.

(g) As part of each compliance report submitted as required under § 63.7550, you must include documentation that the energy conservation measures implemented continue to generate the credit for use in demonstrating compliance with the emission limits.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7178, Jan. 31, 2013; 80 FR 72812, Nov. 20, 2015; 87 FR 60845, Oct. 6, 2022]

Continuous Compliance Requirements

§ 63.7535 Is there a minimum amount of monitoring data I must obtain?

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by § 63.7505(d).

(b) You must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods (see § 63.8(c)(7) of this part), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(c) You may not use data recorded during periods of startup and shutdown, monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system.

(d) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods of startup and shutdown, when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your semi-annual report.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7179, Jan. 31, 2013; 80 FR 72812, Nov. 20, 2015]

§ 63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 15 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.

(1) Following the date on which the initial compliance demonstration is completed or is required to be completed under §§ 63.7 and 63.7510, whichever date comes first, operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits listed in Table 4 of this subpart except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests.

(2) As specified in § 63.7555(d), you must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in either of the following:

(i) Equal to or lower emissions of HCl, mercury, and TSM than the applicable emission limit for each pollutant, if you demonstrate compliance through fuel analysis.

(ii) Equal to or lower fuel input of chlorine, mercury, and TSM than the maximum values calculated during the last performance test, if you demonstrate compliance through performance testing.

(3) If you demonstrate compliance with an applicable HCl emission limit through fuel analysis for a solid or liquid fuel and you plan to burn a new type of solid or liquid fuel, you must recalculate the HCl emission rate using Equation 16 of § 63.7530 according to paragraphs (a)(3)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the HCl emission rate.

(i) You must determine the chlorine concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of chlorine.

(iii) Recalculate the HCl emission rate from your boiler or process heater under these new conditions using Equation 16 of § 63.7530. The recalculated HCl emission rate must be less than the applicable emission limit.

(4) If you demonstrate compliance with an applicable HCl emission limit through performance testing and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum chlorine input using Equation 7 of § 63.7530. If the results of recalculating the maximum chlorine input using Equation 7 of § 63.7530 are greater than the maximum chlorine input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the HCl emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). In recalculating the maximum chlorine input and establishing the new operating limits, you are not required to conduct fuel analyses for and include the fuels described in § 63.7510(a)(2)(i) through (iii).

(5) If you demonstrate compliance with an applicable mercury emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the mercury emission rate using Equation 17 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(i) You must determine the mercury concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of mercury.

(iii) Recalculate the mercury emission rate from your boiler or process heater under these new conditions using Equation 17 of § 63.7530. The recalculated mercury emission rate must be less than the applicable emission limit.

(6) If you demonstrate compliance with an applicable mercury emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum mercury input using Equation 8 of § 63.7530. If the results of recalculating the maximum mercury input using Equation 8 of § 63.7530 are higher than the maximum mercury input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the mercury emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(7) If your unit is controlled with a fabric filter, and you demonstrate continuous compliance using a bag leak detection system, you must initiate corrective action within 1 hour of a bag leak detection system alert and complete corrective actions as soon as practical, and operate and maintain the fabric filter system such that the periods which would cause an alert are no more than 5 percent of the operating time during a 6-month period. You must also keep records of the date, time, and duration of each alert, the time corrective action was initiated and completed, and a brief description of the cause of the alert and the corrective action taken. You must also record the percent of the operating time during each 6-month period that the conditions exist for an alert. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alert time is counted. If corrective action is required, each alert shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alert time shall be counted as the actual amount of time taken to initiate corrective action.

(8) To demonstrate compliance with the applicable alternative CO CEMS emission limit listed in Table 1 or 2 or Tables 11 through 15 to this subpart, you must meet the requirements in paragraphs (a)(8)(i) through (iv) of this section.

(i) Continuously monitor CO according to §§ 63.7525(a) and 63.7535.

(ii) Maintain a CO emission level below or at your applicable alternative CO CEMS-based standard in Table 1 or 2 or Tables 11 through 15 to this subpart at all times the affected unit is subject to numeric emission limits.

(iii) Keep records of CO levels according to § 63.7555(b).

(iv) You must record and make available upon request results of CO CEMS performance audits, dates and duration of periods when the CO CEMS is out of control to completion of the corrective actions necessary to return the CO CEMS to operation consistent with your site-specific monitoring plan.

(9) The owner or operator of a boiler or process heater using a PM CPMS or a PM CEMS to meet requirements of this subpart shall install, certify (PM CEMS only), operate, and maintain the PM CPMS or PM CEMS in accordance with your site-specific monitoring plan as required in § 63.7505(d).

(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to limited-use boilers and process heaters, as defined in § 63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

(11) If your boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of this section), you must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance.

(12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in § 63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.

(13) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

(14) If you are using a CEMS measuring mercury emissions to meet requirements of this subpart you must install, certify, operate, and maintain the mercury CEMS as specified in paragraphs (a)(14)(i) and (ii) of this section.

(i) Operate the mercury CEMS in accordance with performance specification 12A of 40 CFR part 60, appendix B or operate a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in § 63.7545(e)(2)(iii) for mercury CEMS or it must be 720 hours if you specified a 720 hour basis in § 63.7545(e)(2)(iii) for mercury CEMS. For each day in which the unit operates, you must obtain hourly mercury concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a mercury CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR part 60, appendix B, and quality assurance procedure 6 of 40 CFR part 60, appendix F.

(15) If you are using a CEMS to measure HCl emissions to meet requirements of this subpart, you must install, certify, operate, and maintain the HCl CEMS as specified in paragraphs (a)(15)(i) and (ii) of this section. This option for an affected unit takes effect on the date of approval of a site-specific monitoring plan.

(i) Operate the continuous emissions monitoring system in accordance with the applicable performance specification in 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in § 63.7545(e)(2)(iii) for HCl CEMS or it must be 720 hours if you specified a 720 hour basis in § 63.7545(e)(2)(iii) for HCl CEMS. For each day in which the unit operates, you must obtain hourly HCl concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a HCl CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the HCl mass emissions rate to the atmosphere according to the requirements of the applicable performance specification of 40 CFR part 60, appendix B, and the quality assurance procedures of 40 CFR part 60, appendix F.

(16) If you demonstrate compliance with an applicable TSM emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum TSM input using Equation 9 of § 63.7530. If the results of recalculating the maximum TSM input using Equation 9 of § 63.7530 are higher than the maximum total selected input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the TSM emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(17) If you demonstrate compliance with an applicable TSM emission limit through fuel analysis for solid or liquid fuels, and you plan to burn a new type of fuel, you must recalculate the TSM emission rate using Equation 18 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(i) You must determine the TSM concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of TSM.

(iii) Recalculate the TSM emission rate from your boiler or process heater under these new conditions using Equation 18 of § 63.7530. The recalculated TSM emission rate must be less than the applicable emission limit.

(18) If you demonstrate continuous PM emissions compliance with a PM CPMS you will use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. You will conduct your performance test using the test method criteria in Table 5 of this subpart. You will use the PM CPMS to demonstrate continuous compliance with this operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(i) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis.

(ii) For any deviation of the 30-day rolling PM CPMS average value from the established operating parameter limit, you must:

(A) Within 48 hours of the deviation, visually inspect the air pollution control device (APCD);

(B) If inspection of the APCD identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

(C) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph.

(iii) PM CPMS deviations from the operating limit leading to more than four required performance tests in a 12-month operating period constitute a separate violation of this subpart.

(19) If you choose to comply with the PM filterable emissions limit by using PM CEMS you must install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (a)(19)(i) through (vii) of this section. The compliance limit will be expressed as a 30-day rolling average of the numerical emissions limit value applicable for your unit in Table 1 or 2 or Tables 11 through 15 to this subpart.

(i) Install and certify your PM CEMS according to the procedures and requirements in Performance Specification 11 - Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to part 60 of this chapter, using test criteria outlined in Table V of this rule. The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh).

(ii) Operate and maintain your PM CEMS according to the procedures and requirements in Procedure 2 - Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to part 60 of this chapter.

(A) You must conduct the relative response audit (RRA) for your PM CEMS at least once annually.

(B) You must conduct the relative correlation audit (RCA) for your PM CEMS at least once every 3 years.

(iii) Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (v) of this section.

(iv) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler or process heater operating hours.

(v) You must collect data using the PM CEMS at all times the unit is operating and at the intervals specified this paragraph (a), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.

(vi) You must use all the data collected during all boiler or process heater operating hours in assessing the compliance with your operating limit except:

(A) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions in calculations and report any such periods in your annual deviation report;

(B) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out of control periods in calculations used to report emissions or operating levels and report any such periods in your annual deviation report;

(C) Any data recorded during periods of startup or shutdown.

(vii) You must record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with your site-specific monitoring plan.

(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 15 to this subpart that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in this subpart. These deviations must be reported according to the requirements in § 63.7550.

(c) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must follow the sampling frequency specified in paragraphs (c)(1) through (4) of this section and conduct this sampling according to the procedures in § 63.7521(f) through (i).

(1) If the initial mercury constituents in the gaseous fuels are measured to be equal to or less than half of the mercury specification as defined in § 63.7575, you do not need to conduct further sampling.

(2) If the initial mercury constituents are greater than half but equal to or less than 75 percent of the mercury specification as defined in § 63.7575, you will conduct semi-annual sampling. If 6 consecutive semi-annual fuel analyses demonstrate 50 percent or less of the mercury specification, you do not need to conduct further sampling. If any semi-annual sample exceeds 75 percent of the mercury specification, you must return to monthly sampling for that fuel, until 12 months of fuel analyses again are less than 75 percent of the compliance level.

(3) If the initial mercury constituents are greater than 75 percent of the mercury specification as defined in § 63.7575, you will conduct monthly sampling. If 12 consecutive monthly fuel analyses demonstrate 75 percent or less of the mercury specification, you may decrease the fuel analysis frequency to semi-annual for that fuel.

(4) If the initial sample exceeds the mercury specification as defined in § 63.7575, each affected boiler or process heater combusting this fuel is not part of the unit designed to burn gas 1 subcategory and must be in compliance with the emission and operating limits for the appropriate subcategory. You may elect to conduct additional monthly sampling while complying with these emissions and operating limits to demonstrate that the fuel qualifies as another gas 1 fuel. If 12 consecutive monthly fuel analyses samples are at or below the mercury specification as defined in § 63.7575, each affected boiler or process heater combusting the fuel can elect to switch back into the unit designed to burn gas 1 subcategory until the mercury specification is exceeded.

(d) For startup and shutdown, you must meet the work practice standards according to items 5 and 6 of Table 3 of this subpart.

[78 FR 7179, Jan. 31, 2013, as amended at 80 FR 72813, Nov. 20, 2015; 87 FR 60846, Oct. 6, 2022]

§ 63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?

(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of paragraphs (a)(1) through (5) of this section.

(1) For each calendar month, demonstrate compliance with the average weighted emissions limit for the existing units participating in the emissions averaging option as determined in § 63.7522(f) and (g).

(2) You must maintain the applicable opacity limit according to paragraphs (a)(2)(i) and (ii) of this section.

(i) For each existing unit participating in the emissions averaging option that is equipped with a dry control system and not vented to a common stack, maintain opacity at or below the applicable limit.

(ii) For each group of units participating in the emissions averaging option where each unit in the group is equipped with a dry control system and vented to a common stack that does not receive emissions from non-affected units, maintain opacity at or below the applicable limit at the common stack.

(3) For each existing unit participating in the emissions averaging option that is equipped with a wet scrubber, maintain the 30-day rolling average parameter values at or above the operating limits established during the most recent performance test.

(4) For each existing unit participating in the emissions averaging option that has an approved alternative operating parameter, maintain the 30-day rolling average parameter values consistent with the approved monitoring plan.

(5) For each existing unit participating in the emissions averaging option venting to a common stack configuration containing affected units from other subcategories, maintain the appropriate operating limit for each unit as specified in Table 4 to this subpart that applies.

(b) Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (5) of this section is a deviation.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7182, Jan. 31, 2013]

Notification, Reports, and Records

§ 63.7545 What notifications must I submit and when?

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

(b) As specified in § 63.9(b)(2), if you startup your affected source before January 31, 2013, you must submit an Initial Notification not later than 120 days after January 31, 2013, or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(c) As specified in § 63.9(b)(4) and (5), if you startup your new or reconstructed affected source on or after January 31, 2013, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source. For a new or reconstructed affected source that has reclassified to major source status, you must submit an Initial Notification not later 120 days after the source becomes subject to this subpart.

(d) If you are required to conduct a performance test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.

(e) If you are required to conduct an initial compliance demonstration as specified in § 63.7530, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to § 63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8) of this section, as applicable. If you are not required to conduct an initial compliance demonstration as specified in § 63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) of this section and must be submitted within 60 days of the compliance date specified at § 63.7495(b).

(1) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with this subpart, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by you or the EPA through a petition process to be a non-waste under § 241.3 of this chapter, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of § 241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration.

(2) Summary of the results of all performance tests and fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits, and including:

(i) Identification of whether you are complying with the PM emission limit or the alternative TSM emission limit.

(ii) Identification of whether you are complying with the output-based emission limits or the heat input-based (i.e., lb/MMBtu or ppm) emission limits,

(iii) Identification of whether you are complying the arithmetic mean of all valid hours of data from the previous 30 operating days or of the previous 720 hours. This identification shall be specified separately for each operating parameter.

(3) A summary of the maximum CO emission levels recorded during the performance test to show that you have met any applicable emission standard in Table 1 or 2 or Tables 11 through 15 to this subpart, if you are not using a CO CEMS to demonstrate compliance.

(4) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing, a CEMS, or fuel analysis.

(5) Identification of whether you plan to demonstrate compliance by emissions averaging and identification of whether you plan to demonstrate compliance by using efficiency credits through energy conservation:

(i) If you plan to demonstrate compliance by emission averaging, report the emission level that was being achieved or the control technology employed on January 31, 2013.

(ii) [Reserved]

(6) A signed certification that you have met all applicable emission limits and work practice standards.

(7) If you had a deviation from any emission limit, work practice standard, or operating limit, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.

(8) In addition to the information required in § 63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) “This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR part 63 subpart DDDDD at this site according to the procedures in § 63.7540(a)(10)(i) through (vi).”

(ii) “This facility has had an energy assessment performed according to § 63.7530(e).”

(iii) Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: “No secondary materials that are solid waste were combusted in any affected unit.”

(f) If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to this subpart, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in § 63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in § 63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.

(4) Type of alternative fuel that you intend to use.

(5) Dates when the alternative fuel use is expected to begin and end.

(g) If you intend to commence or recommence combustion of solid waste, you must provide 30 days prior notice of the date upon which you will commence or recommence combustion of solid waste. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in § 63.7490, the location of the source, the boiler(s) or process heater(s) that will commence burning solid waste, and the date of the notice.

(2) The currently applicable subcategories under this subpart.

(3) The date on which you became subject to the currently applicable emission limits.

(4) The date upon which you will commence combusting solid waste.

(h) If you have switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in § 63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.

(2) The currently applicable subcategory under this subpart.

(3) The date upon which the fuel switch or physical change occurred.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7183, Jan. 31, 2013; 80 FR 72814, Nov. 20, 2015; 85 FR 73913, Nov. 19, 2020; 85 FR 84262, Dec. 28, 2020; 87 FR 60846, Oct. 6, 2022]

§ 63.7550 What reports must I submit and when?

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct subsequent annual, biennial, or 5-year tune-up according to § 63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(1) The first semi-annual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in § 63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in § 63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in § 63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in § 63.7495.

(2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in § 63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent semi-annual 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. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.

(4) Each subsequent semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

(5) For each affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this chapter, 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 in the permit instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to the requirements of a tune up you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of this section, (xiv) and (xvii) of this section, and paragraph (c)(5)(iv) of this section for limited-use boiler or process heater.

(2) If you are complying with the fuel analysis you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii), (vi), (x), (xi), (xiii), (xv), (xvii), (xviii) and paragraph (d) of this section.

(3) If you are complying with the applicable emissions limit with performance testing you must submit a compliance report with the information in (c)(5)(i) through (iii), (vi), (vii), (viii), (ix), (xi), (xiii), (xv), (xvii), (xviii) and paragraph (d) of this section.

(4) If you are complying with an emissions limit using a CMS the compliance report must contain the information required in paragraphs (c)(5)(i) through (iii), (v), (vi), (xi) through (xiii), (xv) through (xviii), and paragraph (e) of this section.

(5)

(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

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

(iv) The total operating time during the reporting period.

(v) If you use a CMS, including CEMS, COMS, or CPMS, you must include the monitoring equipment manufacturer(s) and model numbers and the date of the last CMS certification or audit.

(vi) The total fuel use by each individual boiler or process heater subject to an emission limit within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or your basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.

(vii) If you are conducting performance tests once every 3 years consistent with § 63.7515(b) or (c), the date of the last 2 performance tests and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.

(viii) A statement indicating that you burned no new types of fuel in an individual boiler or process heater subject to an emission limit. Or, if you did burn a new type of fuel and are subject to a HCl emission limit, you must submit the calculation of chlorine input, using Equation 7 of § 63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 16 of § 63.7530 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a mercury emission limit, you must submit the calculation of mercury input, using Equation 8 of § 63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 17 of § 63.7530 that demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a TSM emission limit, you must submit the calculation of TSM input, using Equation 9 of § 63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate, using Equation 18 of § 63.7530, that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

(ix) If you wish to burn a new type of fuel in an individual boiler or process heater subject to an emission limit and you cannot demonstrate compliance with the maximum chlorine input operating limit using Equation 7 of § 63.7530 or the maximum mercury input operating limit using Equation 8 of § 63.7530, or the maximum TSM input operating limit using Equation 9 of § 63.7530 you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

(x) A summary of any monthly fuel analyses conducted to demonstrate compliance according to §§ 63.7521 and 63.7530 for individual boilers or process heaters subject to emission limits, and any fuel specification analyses conducted according to §§ 63.7521(f) and 63.7530(g).

(xi) If there are no deviations from any emission limits or operating limits in this subpart that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.

(xii) If there were no deviations from the monitoring requirements including no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in § 63.8(c)(7), a statement that there were no deviations and no periods during which the CMS were out of control during the reporting period.

(xiii) If a malfunction occurred during the reporting period, the 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 you during a malfunction of a boiler, process heater, or associated air pollution control device or CMS to minimize emissions in accordance with § 63.7500(a)(3), including actions taken to correct the malfunction.

(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to § 63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

(xv) If you plan to demonstrate compliance by emission averaging, certify the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in § 63.7545(e)(5)(i).

(xvi) For each reporting period, the compliance reports must include all of the calculated 30 day rolling average values for CEMS (CO, HCl, SO_2, and mercury), 10 day rolling average values for CO CEMS when the limit is expressed as a 10 day instead of 30 day rolling average, and the PM CPMS data.

(xvii) 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.

(xviii) For each instance of startup or shutdown include the information required to be monitored, collected, or recorded according to the requirements of § 63.7555(d).

(d) For each deviation from an emission limit or operating limit in this subpart that occurs at an individual boiler or process heater where you are not using a CMS to comply with that emission limit or operating limit, or from the work practice standards for periods if startup and shutdown, the compliance report must additionally contain the information required in paragraphs (d)(1) through (3) of this section.

(1) A description of the deviation and which emission limit, operating limit, or work practice standard from which you deviated.

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

(3) If the deviation occurred during an annual performance test, provide the date the annual performance test was completed.

(e) For each deviation from an emission limit, operating limit, and monitoring requirement in this subpart occurring at an individual boiler or process heater where you are using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the information required in paragraphs (e)(1) through (9) of this section. This includes any deviations from your site-specific monitoring plan as required in § 63.7505(d).

(1) The date and time that each deviation started and stopped and description of the nature of the deviation (i.e., what you deviated from).

(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.

(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 characterization 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's downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

(8) A brief description of the source for which there was a deviation.

(9) A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

(f)-(g) [Reserved]

(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.

(1) Within 60 days after the date of completing each performance test (as defined in § 63.2) required by this subpart, you must submit the results of the performance tests, including any fuel analyses, following the procedure specified in either paragraph (h)(1)(i) or (ii) of this section.

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (*http://www.epa.gov/ttn/chief/ert/index.html*), you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*).) Performance test data must be submitted in a file format generated through use of the EPA's ERT or an electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in § 63.13.

(2) Within 60 days after the date of completing each CEMS performance evaluation (as defined in 63.2), you must submit the results of the performance evaluation following the procedure specified in either paragraph (h)(2)(i) or (ii) of this section.

(i) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance evaluation data must be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance evaluation information being transmitted is CBI, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in § 63.13.

(3) You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (*http://www.epa.gov/ttn/chief/cedri/index.html*), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in § 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.

[78 FR 7183, Jan. 31, 2013, as amended at 80 FR 72814, Nov. 20, 2015]

§ 63.7555 What records must I keep?

(a) You must keep records according to paragraphs (a)(1) and (2) 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 or semiannual compliance report that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in § 63.10(b)(2)(viii).

(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.

(b) For each CEMS, COMS, and continuous monitoring system you must keep records according to paragraphs (b)(1) through (5) of this section.

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

(2) Monitoring data for continuous opacity monitoring system during a performance evaluation as required in § 63.6(h)(7)(i) and (ii).

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

(4) Request for alternatives to relative accuracy test for CEMS as required in § 63.8(f)(6)(i).

(5) Records of the date and time that each deviation started and stopped.

(c) You must keep the records required in Table 8 to this subpart including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies to you.

(d) For each boiler or process heater subject to an emission limit in Table 1 or 2 or Tables 11 through 15 to this subpart, you must also keep the applicable records in paragraphs (d)(1) through (11) of this section.

(1) You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.

(2) If you combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to § 241.3(b)(1) and (2) of this chapter, you must keep a record that documents how the secondary material meets each of the legitimacy criteria under § 241.3(d)(1) of this chapter. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to § 241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfy the definition of processing in § 241.2 of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under § 241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per § 241.4 of this chapter, you must keep records documenting that the material is listed as a non-waste under § 241.4(a) of this chapter. Units exempt from the incinerator standards under section 129(g)(1) of the Clean Air Act because they are qualifying facilities burning a homogeneous waste stream do not need to maintain the records described in this paragraph (d)(2).

(3) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 7 of § 63.7530, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 16 of § 63.7530, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.

(4) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 8 of § 63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 17 of § 63.7530, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.

(5) If, consistent with § 63.7515(b), you choose to stack test less frequently than annually, you must keep a record that documents that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit (or, in specific instances noted in Tables 1 and 2 or 11 through 15 to this subpart, less than the applicable emission limit), and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(6) Records of the occurrence and duration of each malfunction of the boiler or process heater, or of the associated air pollution control and monitoring equipment.

(7) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in § 63.7500(a)(3), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to its normal or usual manner of operation.

(8) A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 9 of § 63.7530, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 18 of § 63.7530, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.

(9) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(10) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

(11) For each startup period, for units selecting paragraph (2) of the definition of “startup” in § 63.7575 you must maintain records of the time that clean fuel combustion begins; the time when you start feeding fuels that are not clean fuels; the time when useful thermal energy is first supplied; and the time when the PM controls are engaged.

(12) If you choose to rely on paragraph (2) of the definition of “startup” in § 63.7575, for each startup period, you must maintain records of the hourly steam temperature, hourly steam pressure, hourly steam flow, hourly flue gas temperature, and all hourly average CMS data (*e.g.,* CEMS, PM CPMS, COMS, ESP total secondary electric power input, scrubber pressure drop, scrubber liquid flow rate) collected during each startup period to confirm that the control devices are engaged. In addition, if compliance with the PM emission limit is demonstrated using a PM control device, you must maintain records as specified in paragraphs (d)(12)(i) through (iii) of this section.

(i) For a boiler or process heater with an electrostatic precipitator, record the number of fields in service, as well as each field's secondary voltage and secondary current during each hour of startup.

(ii) For a boiler or process heater with a fabric filter, record the number of compartments in service, as well as the differential pressure across the baghouse during each hour of startup.

(iii) For a boiler or process heater with a wet scrubber needed for filterable PM control, record the scrubber's liquid flow rate and the pressure drop during each hour of startup.

(13) If you choose to use paragraph (2) of the definition of “startup” in § 63.7575 and you find that you are unable to safely engage and operate your PM control(s) within 1 hour of first firing of non-clean fuels, you may choose to rely on paragraph (1) of definition of “startup” in § 63.7575 or you may submit to the delegated permitting authority a request for a variance with the PM controls requirement, as described below.

(i) The request shall provide evidence of a documented manufacturer-identified safety issue.

(ii) The request shall provide information to document that the PM control device is adequately designed and sized to meet the applicable PM emission limit.

(iii) In addition, the request shall contain documentation that:

(A) The unit is using clean fuels to the maximum extent possible to bring the unit and PM control device up to the temperature necessary to alleviate or prevent the identified safety issues prior to the combustion of primary fuel;

(B) The unit has explicitly followed the manufacturer's procedures to alleviate or prevent the identified safety issue; and

(C) Identifies with specificity the details of the manufacturer's statement of concern.

(iv) You must comply with all other work practice requirements, including but not limited to data collection, recordkeeping, and reporting requirements.

(e) If you elect to average emissions consistent with § 63.7522, you must additionally keep a copy of the emission averaging implementation plan required in § 63.7522(g), all calculations required under § 63.7522, including monthly records of heat input or steam generation, as applicable, and monitoring records consistent with § 63.7541.

(f) If you elect to use efficiency credits from energy conservation measures to demonstrate compliance according to § 63.7533, you must keep a copy of the Implementation Plan required in § 63.7533(d) and copies of all data and calculations used to establish credits according to § 63.7533(b), (c), and (f).

(g) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must maintain monthly records (or at the frequency required by § 63.7540(c)) of the calculations and results of the fuel specification for mercury in Table 6.

(h) If you operate a unit in the unit designed to burn gas 1 subcategory that is subject to this subpart, and you use an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under this part, other gas 1 fuel, or gaseous fuel subject to another subpart of this part or part 60, 61, or 65, you must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7185, Jan. 31, 2013; 80 FR 72816, Nov. 20, 2015; 87 FR 60846, Oct. 6, 2022]

§ 63.7560 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 on site, or they must be accessible from on site (for example, through a computer network), 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 off site for the remaining 3 years.

Other Requirements and Information

§ 63.7565 What parts of the General Provisions apply to me?

Table 10 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

§ 63.7570 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the EPA, or an Administrator 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 (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 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 listed in paragraphs (b)(1) through (4) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency, however, the EPA retains oversight of this subpart and can take enforcement actions, as appropriate.

(1) Approval of alternatives to the emission limits and work practice standards in § 63.7500(a) and (b) under § 63.6(g), except as specified in § 63.7555(d)(13).

(2) Approval of major change to test methods in Table 5 to this subpart under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90, and alternative analytical methods requested under § 63.7521(b)(2).

(3) Approval of major change to monitoring under § 63.8(f) and as defined in § 63.90, and approval of alternative operating parameters under §§ 63.7500(a)(2) and 63.7522(g)(2).

(4) Approval of major change to recordkeeping and reporting under § 63.10(e) and as defined in § 63.90.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7186, Jan. 31, 2013; 80 FR 72817, Nov. 20, 2015]

§ 63.7575 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in § 63.2 (the General Provisions), and in this section as follows:

10-day rolling average means the arithmetic mean of the previous 240 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating. The 240 hours should be consecutive, but not necessarily continuous if operations were intermittent.

12-month rolling average means the arithmetic mean of the previous 12 months of valid fuel analysis data. The 12 months should be consecutive, but not necessarily continuous if operations were intermittent.

30-day rolling average means the arithmetic mean of the previous 720 hours of valid CO CEMS data. The 720 hours should be consecutive, but not necessarily continuous if operations were intermittent. For parameters other than CO, 30-day rolling average means either the arithmetic mean of all valid hours of data from 30 successive operating days or the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating.

Annual capacity factor means the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

Annual heat input means the heat input for the 12 months preceding the compliance demonstration.

Average annual heat input rate means total heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

Bag leak detection system means a group of instruments that are capable of monitoring particulate matter loadings in the exhaust of a fabric filter (*i.e.,* baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

Benchmark means the fuel heat input for a boiler or process heater for the one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

Biodiesel means a mono-alkyl ester derived from biomass and conforming to ASTM D6751-11b, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels (incorporated by reference, see § 63.14).

Biomass or bio-based solid fuel means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue; wood products (*e.g.,* trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (*e.g.,* almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste.

Blast furnace gas fuel-fired boiler or process heater means an industrial/commercial/institutional boiler or process heater that receives 90 percent or more of its total annual gas volume from blast furnace gas.

Boiler means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a boiler unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Waste heat boilers are excluded from this definition.

Boiler system means the boiler and associated components, such as, the feed water system, the combustion air system, the fuel system (including burners), blowdown system, combustion control systems, steam systems, and condensate return systems.

Calendar year means the period between January 1 and December 31, inclusive, for a given year.

Clean dry biomass means any biomass-based solid fuel that have not been painted, pigment-stained, or pressure treated, does not contain contaminants at concentrations not normally associated with virgin biomass materials and has a moisture content of less than 20 percent and is not a solid waste.

Coal means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by ASTM D388 (incorporated by reference, see § 63.14), coal refuse, and petroleum coke. For the purposes of this subpart, this definition of “coal” includes synthetic fuels derived from coal, including but not limited to, solvent-refined coal, coal-oil mixtures, and coal-water mixtures. Coal derived gases are excluded from this definition.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (6,000 Btu per pound) on a dry basis.

Commercial/institutional boiler means a boiler used in commercial establishments or institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, elementary and secondary schools, libraries, religious establishments, governmental buildings, hotels, restaurants, and laundries to provide electricity, steam, and/or hot water.

Common stack means the exhaust of emissions from two or more affected units through a single flue. Affected units with a common stack may each have separate air pollution control systems located before the common stack, or may have a single air pollution control system located after the exhausts come together in a single flue.

Cost-effective energy conservation measure means a measure that is implemented to improve the energy efficiency of the boiler or facility that has a payback (return of investment) period of 2 years or less.

Daily block average means the arithmetic mean of all valid emission concentrations or parameter levels recorded when a unit is operating measured over the 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight), except for periods of startup and shutdown or downtime.

Deviation.

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

(i) Fails to meet any applicable requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard; or

(ii) 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.

(2) A deviation is not always a violation.

Dioxins/furans means tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see § 63.14) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see § 63.14), kerosene, and biodiesel as defined by the American Society of Testing and Materials in ASTM D6751-11b (incorporated by reference, see § 60.14).

Dry scrubber means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems used as control devices in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

Dutch oven means a unit having a refractory-walled cell connected to a conventional boiler setting. Fuel materials are introduced through an opening in the roof of the dutch oven and burn in a pile on its floor. Fluidized bed boilers are not part of the dutch oven design category.

Efficiency credit means emission reductions above those required by this subpart. Efficiency credits generated may be used to comply with the emissions limits. Credits may come from pollution prevention projects that result in reduced fuel use by affected units. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to implementation of the energy conservation measures identified in the energy assessment.

Electric utility steam generating unit (EGU) means a fossil fuel-fired combustion unit of more than 25 megawatts electric (MWe) that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 MWe output to any utility power distribution system for sale is considered an electric utility steam generating unit. To be “capable of combusting” fossil fuels, an EGU would need to have these fuels allowed in their operating permits and have the appropriate fuel handling facilities on-site or otherwise available (e.g., coal handling equipment, including coal storage area, belts and conveyers, pulverizers, etc.; oil storage facilities). In addition, fossil fuel-fired EGU means any EGU that fired fossil fuel for more than 10.0 percent of the average annual heat input in any 3 consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year after April 16, 2012.

Electrostatic precipitator (ESP) means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper. An electrostatic precipitator is usually a dry control system.

Energy assessment means the following for the emission units covered by this subpart:

(1) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of less than 0.3 trillion Btu (TBtu) per year will be 8 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 50 percent of the affected boiler(s) energy (*e.g.,* steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing an 8-hour on-site energy assessment.

(2) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of 0.3 to 1.0 TBtu/year will be 24 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 33 percent of the energy (*e.g.,* steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing a 24-hour on-site energy assessment.

(3) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity greater than 1.0 TBtu/year will be up to 24 on-site technical labor hours in length for the first TBtu/yr plus 8 on-site technical labor hours for every additional 1.0 TBtu/yr not to exceed 160 on-site technical hours, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 20 percent of the energy (*e.g.,* steam, process heat, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities.

(4) The on-site energy use systems serving as the basis for the percent of affected boiler(s) and process heater(s) energy production in paragraphs (1), (2), and (3) of this definition may be segmented by production area or energy use area as most logical and applicable to the specific facility being assessed (*e.g.,* product X manufacturing area; product Y drying area; Building Z).

Energy management practices means the set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility.

Energy management program means a program that includes a set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility. Facilities may establish their program through energy management systems compatible with ISO 50001.

Energy use system includes the following systems located on-site that use energy (steam, hot water, or electricity) provided by the affected boiler or process heater: process heating; compressed air systems; machine drive (motors, pumps, fans); process cooling; facility heating, ventilation, and air-conditioning systems; hot water systems; building envelop; and lighting; or other systems that use steam, hot water, process heat, or electricity provided by the affected boiler or process heater. Energy use systems are only those systems using energy clearly produced by affected boilers and process heaters.

Equivalent means the following only as this term is used in Table 6 to this subpart:

(1) An equivalent sample collection procedure means a published voluntary consensus standard or practice (VCS) or EPA method that includes collection of a minimum of three composite fuel samples, with each composite consisting of a minimum of three increments collected at approximately equal intervals over the test period.

(2) An equivalent sample compositing procedure means a published VCS or EPA method to systematically mix and obtain a representative subsample (part) of the composite sample.

(3) An equivalent sample preparation procedure means a published VCS or EPA method that: Clearly states that the standard, practice or method is appropriate for the pollutant and the fuel matrix; or is cited as an appropriate sample preparation standard, practice or method for the pollutant in the chosen VCS or EPA determinative or analytical method.

(4) An equivalent procedure for determining heat content means a published VCS or EPA method to obtain gross calorific (or higher heating) value.

(5) An equivalent procedure for determining fuel moisture content means a published VCS or EPA method to obtain moisture content. If the sample analysis plan calls for determining metals (especially the mercury,

selenium, or arsenic) using an aliquot of the dried sample, then the drying temperature must be modified to prevent vaporizing these metals. On the other hand, if metals analysis is done on an “as received” basis, a separate aliquot can be dried to determine moisture content and the metals concentration mathematically adjusted to a dry basis.

(6) An equivalent pollutant (mercury, HCl) determinative or analytical procedure means a published VCS or EPA method that clearly states that the standard, practice, or method is appropriate for the pollutant and the fuel matrix and has a published detection limit equal or lower than the methods listed in Table 6 to this subpart for the same purpose.

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse. A fabric filter is a dry control system.

Federally enforceable means all limitations and conditions that are enforceable by the EPA Administrator, including, but not limited to, the requirements of 40 CFR parts 60, 61, 63, and 65, requirements within any applicable state implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed boiler means a boiler utilizing a fluidized bed combustion process that is not a pulverized coal boiler.

Fluidized bed boiler with an integrated fluidized bed heat exchanger means a boiler utilizing a fluidized bed combustion where the entire tube surface area is located outside of the furnace section at the exit of the cyclone section and exposed to the flue gas stream for conductive heat transfer. This design applies only to boilers in the unit designed to burn coal/solid fossil fuel subcategory that fire coal refuse.

Fluidized bed combustion means a process where a fuel is burned in a bed of granulated particles, which are maintained in a mobile suspension by the forward flow of air and combustion products.

Fossil fuel means natural gas, oil, coal, and any form of solid, liquid, or gaseous fuel derived from such material.

Fuel cell means a boiler type in which the fuel is dropped onto suspended fixed grates and is fired in a pile. The refractory-lined fuel cell uses combustion air preheating and positioning of secondary and tertiary air injection ports to improve boiler efficiency. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, and suspension burners are not part of the fuel cell subcategory.

Fuel type means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, sub-bituminous coal, lignite, anthracite, biomass, distillate oil, residual oil. Individual fuel types received from different suppliers are not considered new fuel types.

Gaseous fuel includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, and biogas. Blast furnace gas and process gases that are regulated under another subpart of this part, or part 60, part 61, or part 65 of this chapter, are exempted from this definition.

Heat input means heat derived from combustion of fuel in a boiler or process heater and does not include the heat input from preheated combustion air, recirculated flue gases, returned condensate, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns, etc.

Heavy liquid includes residual oil and any other liquid fuel not classified as a light liquid.

Hourly average means the arithmetic average of at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous, liquid, or biomass/bio-based solid fuel and is withdrawn for use external to the vessel. Hot water boilers (i.e., not generating steam) combusting gaseous, liquid, or biomass fuel with a heat input capacity of less than 1.6 million Btu per hour are included in this definition. The 120 U.S. gallon capacity threshold to be considered a hot water heater is independent of the 1.6 MMBtu/hr heat input capacity threshold for hot water boilers. Hot water heater also means a tankless unit that provides on demand hot water.

Hybrid suspension grate boiler means a boiler designed with air distributors to spread the fuel material over the entire width and depth of the boiler combustion zone. The biomass fuel combusted in these units exceeds a moisture content of 40 percent on an as-fired annual heat input basis as demonstrated by monthly fuel analysis. The drying and much of the combustion of the fuel takes place in suspension, and the combustion is completed on the grate or floor of the boiler. Fluidized bed, dutch oven, and pile burner designs are not part of the hybrid suspension grate boiler design category.

Industrial boiler means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

Light liquid includes distillate oil, biodiesel, or vegetable oil.

Limited-use boiler or process heater means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable annual capacity factor of no more than 10 percent.

Liquid fuel includes, but is not limited to, light liquid, heavy liquid, any form of liquid fuel derived from petroleum, used oil, liquid biofuels, biodiesel, and vegetable oil.

Load fraction means the actual heat input of a boiler or process heater divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (*e.g.,* for 50 percent load the load fraction is 0.5). For boilers and process heaters that co-fire natural gas or refinery gas with a solid or liquid fuel, the load fraction is determined by the actual heat input of the solid or liquid fuel divided by heat input of the solid or liquid fuel fired during the performance test (*e.g.,* if the performance test was conducted at 100 percent solid fuel firing, for 100 percent load firing 50 percent solid fuel and 50 percent natural gas the load fraction is 0.5).

Major source for oil and natural gas production facilities, 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) Emissions from processes, operations, or equipment that are not part of the same facility, as defined in this section, shall not be aggregated; and

(3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels with the potential for flash emissions shall be aggregated for a major source determination. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated for a major source determination.

Metal process furnaces are a subcategory of process heaters, as defined in this subpart, which include natural gas-fired annealing furnaces, preheat furnaces, reheat furnaces, aging furnaces, heat treat furnaces, and homogenizing furnaces.

Million Btu (MMBtu) means one million British thermal units.

Minimum activated carbon injection rate means load fraction multiplied by the lowest hourly average activated carbon injection rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum oxygen level means the lowest hourly average oxygen level measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum pressure drop means the lowest hourly average pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum scrubber effluent pH means the lowest hourly average sorbent liquid pH measured at the inlet to the wet scrubber according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable hydrogen chloride emission limit.

Minimum scrubber liquid flow rate means the lowest hourly average liquid flow rate (e.g., to the PM scrubber or to the acid gas scrubber) measured according to Table 7 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limit.

Minimum scrubber pressure drop means the lowest hourly average scrubber pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum sorbent injection rate means:

(1) The load fraction multiplied by the lowest hourly average sorbent injection rate for each sorbent measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits; or

(2) For fluidized bed combustion not using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, the lowest average ratio of sorbent to sulfur measured during the most recent performance test.

Minimum total secondary electric power means the lowest hourly average total secondary electric power determined from the values of secondary voltage and secondary current to the electrostatic precipitator measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined in ASTM D1835 (incorporated by reference, see § 63.14); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or

(4) Propane or propane derived synthetic natural gas. Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the boiler or process heater unit. It is not necessary for fuel to be combusted for the entire 24-hour period. For calculating rolling average emissions, an operating day does not include the hours of operation during startup or shutdown.

Other combustor means a unit designed to burn solid fuel that is not classified as a dutch oven, fluidized bed, fuel cell, hybrid suspension grate boiler, pulverized coal boiler, stoker, sloped grate, or suspension boiler as defined in this subpart.

Other gas 1 fuel means a gaseous fuel that is not natural gas or refinery gas and does not exceed a maximum mercury concentration of 40 micrograms/cubic meters of gas.

Oxygen analyzer system means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler or process heater, firebox, or other appropriate location. This definition includes oxygen trim systems. The source owner or operator must install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

Oxygen trim system means a system of monitors that is used to maintain excess air at the desired level in a combustion device over its operating load range. A typical system consists of a flue gas oxygen and/or CO monitor that automatically provides a feedback signal to the combustion air controller or draft controller.

Particulate matter (PM) means any finely divided solid or liquid material, other than uncombined water, as measured by the test methods specified under this subpart, or an approved alternative method.

Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected boiler or process heater is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

Pile burner means a boiler design incorporating a design where the anticipated biomass fuel has a high relative moisture content. Grates serve to support the fuel, and underfire air flowing up through the grates provides oxygen for combustion, cools the grates, promotes turbulence in the fuel bed, and fires the fuel. The most common form of pile burning is the dutch oven.

Process heater means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a process heater unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves. Waste heat process heaters are excluded from this definition.

Pulverized coal boiler means a boiler in which pulverized coal or other solid fossil fuel is introduced into an air stream that carries the coal to the combustion chamber of the boiler where it is fired in suspension.

Qualified energy assessor means:

(1) Someone who has demonstrated capabilities to evaluate energy savings opportunities for steam generation and major energy using systems, including, but not limited to:

(i) Boiler combustion management.

(ii) Boiler thermal energy recovery, including

(A) Conventional feed water economizer,

(B) Conventional combustion air preheater, and

(C) Condensing economizer.

(iii) Boiler blowdown thermal energy recovery.

(iv) Primary energy resource selection, including

(A) Fuel (primary energy source) switching, and

(B) Applied steam energy versus direct-fired energy versus electricity.

(v) Insulation issues.

(vi) Steam trap and steam leak management.

(vi) Condensate recovery.

(viii) Steam end-use management.

(2) Capabilities and knowledge includes, but is not limited to:

(i) Background, experience, and recognized abilities to perform the assessment activities, data analysis, and report preparation.

(ii) Familiarity with operating and maintenance practices for steam or process heating systems.

(iii) Additional potential steam system improvement opportunities including improving steam turbine operations and reducing steam demand.

(iv) Additional process heating system opportunities including effective utilization of waste heat and use of proper process heating methods.

(v) Boiler-steam turbine cogeneration systems.

(vi) Industry specific steam end-use systems.

Refinery gas means any gas that is generated at a petroleum refinery and is combusted. Refinery gas includes natural gas when the natural gas is combined and combusted in any proportion with a gas generated at a refinery. Refinery gas includes gases generated from other facilities when that gas is combined and combusted in any proportion with gas generated at a refinery.

Regulated gas stream means an offgas stream that is routed to a boiler or process heater for the purpose of achieving compliance with a standard under another subpart of this part or part 60, part 61, or part 65 of this chapter.

Residential boiler means a boiler used to provide heat and/or hot water and/or as part of a residential combined heat and power system. This definition includes boilers located at an institutional facility (e.g., university campus, military base, church grounds) or commercial/industrial facility (e.g., farm) used primarily to provide heat and/or hot water for:

(1) A dwelling containing four or fewer families; or

(2) A single unit residence dwelling that has since been converted or subdivided into condominiums or apartments.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society of Testing and Materials in ASTM D396-10 (incorporated by reference, *see* § 63.14(b)).

Responsible official means responsible official as defined in § 70.2.

Rolling average means the average of all data collected during the applicable averaging period. For demonstration of compliance with a CO CEMS-based emission limit based on CO concentration a 30-day (10-day) rolling average is comprised of the average of all the hourly average concentrations over the previous 720 (240) operating hours calculated each operating day. To demonstrate compliance on a 30-day rolling average basis for parameters other than CO, you must indicate the basis of the 30-day rolling average period you are using for compliance, as discussed in § 63.7545(e)(2)(iii). If you indicate the 30 operating day basis, you must calculate a new average value each operating day and shall include the measured hourly values for the preceding 30 operating days. If you select the 720 operating hours basis, you must average of all the hourly average concentrations over the previous 720 operating hours calculated each operating day.

Secondary material means the material as defined in § 241.2 of this chapter.

Shutdown means the period in which cessation of operation of a boiler or process heater is initiated for any purpose. Shutdown begins when the boiler or process heater no longer supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown ends when the boiler or process heater no longer supplies useful thermal energy (such as steam or heat) for heating, cooling, or process purposes and/or generates electricity, and no fuel is being combusted in the boiler or process heater.

Sloped grate means a unit where the solid fuel is fed to the top of the grate from where it slides downwards; while sliding the fuel first dries and then ignites and burns. The ash is deposited at the bottom of the grate. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a sloped grate design.

Solid fossil fuel includes, but is not limited to, coal, coke, petroleum coke, and tire derived fuel.

Solid fuel means any solid fossil fuel or biomass or bio-based solid fuel.

Startup means:

(1) Either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy for heating and/or producing electricity, or for any other purpose, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the useful thermal energy from the boiler or process heater is supplied for heating, and/or producing electricity, or for any other purpose, or

(2) The period in which operation of a boiler or process heater is initiated for any purpose. Startup begins with either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy (such as steam or heat) for heating, cooling or process purposes, or producing electricity, or the firing of fuel in a boiler or process heater for any purpose after a shutdown event. Startup ends four hours after when the boiler or process heater supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes, or generates electricity, whichever is earlier.

Steam output means:

(1) For a boiler that produces steam for process or heating only (no power generation), the energy content in terms of MMBtu of the boiler steam output,

(2) For a boiler that cogenerates process steam and electricity (also known as combined heat and power), the total energy output, which is the sum of the energy content of the steam exiting the turbine and sent to process in MMBtu and the energy of the electricity generated converted to MMBtu at a rate of 10,000 Btu per kilowatt-hour generated (10 MMBtu per megawatt-hour), and

(3) For a boiler that generates only electricity, the alternate output-based emission limits would be the appropriate emission limit from Table 1, 2, 14, or 15 to this subpart in units of pounds per million Btu heat input (lb per MWh).

(4) For a boiler that performs multiple functions and produces steam to be used for any combination of paragraphs (1), (2), and (3) of this definition that includes electricity generation of paragraph (3) of this definition,

the total energy output, in terms of MMBtu of steam output, is the sum of the energy content of steam sent directly to the process and/or used for heating (S_1), the energy content of turbine steam sent to process plus energy in electricity according to paragraph (2) of this definition (S_2), and the energy content of electricity generated by a electricity only turbine as paragraph (3) of this definition (MW_3) and would be calculated using Equation 1 to this definition. In the case of boilers supplying steam to one or more common headers, S_1, S_2, and $MW_{(3)}$ for each boiler would be calculated based on its (steam energy) contribution (fraction of total steam energy) to the common header.

Equation 1 to the definition *Steam Output*

$$SO_M = S_1 + S_2 + (MW_{(3)}\ x\ CFn) \qquad \text{(Eq. 1)}$$

Where:

SO_M = Total steam output for multi-function boiler, MMBtu.

S_1 = Energy content of steam sent directly to the process and/or used for heating, MMBtu.

S_2 = Energy content of turbine steam sent to the process plus energy in electricity according to paragraph (2) of this definition, MMBtu.

$MW_{(3)}$ = Electricity generated according to paragraph (3) of this definition, MWh.

CFn = Conversion factor for the appropriate subcategory for converting electricity generated according to paragraph (3) of this definition to equivalent steam energy, MMBtu/MWh.

CFn for emission limits for boilers in the unit designed to burn solid fuel subcategory = 10.8.

CFn PM and CO emission limits for boilers in one of the subcategories of units designed to burn coal = 11.7.

CFn PM and CO emission limits for boilers in one of the subcategories of units designed to burn biomass = 12.1.

CFn for emission limits for boilers in one of the subcategories of units designed to burn liquid fuel = 11.2.

CFn for emission limits for boilers in the unit designed to burn gas 2 (other) subcategory = 6.2.

Stoker means a unit consisting of a mechanically operated fuel feeding mechanism, a stationary or moving grate to support the burning of fuel and admit under-grate air to the fuel, an overfire air system to complete combustion, and an ash discharge system. This definition of stoker includes air swept stokers. There are two general types of stokers: Underfeed and overfeed. Overfeed stokers include mass feed and spreader stokers. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a stoker design.

Stoker/sloped grate/other unit designed to burn kiln dried biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and is not in the stoker/sloped grate/other units designed to burn wet biomass subcategory.

Stoker/sloped grate/other unit designed to burn wet biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and any of the biomass/bio-based solid fuel combusted in the unit exceeds 20 percent moisture on an annual heat input basis.

Suspension burner means a unit designed to fire dry biomass/biobased solid particles in suspension that are conveyed in an airstream to the furnace like pulverized coal. The combustion of the fuel material is completed on a grate or floor below. The biomass/biobased fuel combusted in the unit shall not exceed 20 percent moisture on an annual heat input basis. Fluidized bed, dutch oven, pile burner, and hybrid suspension grate units are not part of the suspension burner subcategory.

Temporary boiler means any gaseous or liquid fuel boiler or process heater that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler or process heater is not a temporary boiler or process heater if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The boiler or process heater or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler or process heater that replaces a temporary boiler or process heater at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, process heat, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

Total selected metals (TSM) means the sum of the following metallic hazardous air pollutants: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.

Traditional fuel means the fuel as defined in § 241.2 of this chapter.

Tune-up means adjustments made to a boiler or process heater in accordance with the procedures outlined in § 63.7540(a)(10).

Ultra low sulfur liquid fuel means a distillate oil that has less than or equal to 15 ppm sulfur.

Unit designed to burn biomass/bio-based solid subcategory includes any boiler or process heater that burns at least 10 percent biomass or bio-based solids on an annual heat input basis in combination with solid fossil fuels, liquid fuels, or gaseous fuels.

Unit designed to burn coal/solid fossil fuel subcategory includes any boiler or process heater that burns any coal or other solid fossil fuel alone or at least 10 percent coal or other solid fossil fuel on an annual heat input basis in combination with liquid fuels, gaseous fuels, or less than 10 percent biomass and bio-based solids on an annual heat input basis.

Unit designed to burn gas 1 subcategory includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

Unit designed to burn gas 2 (other) subcategory includes any boiler or process heater that is not in the unit designed to burn gas 1 subcategory and burns any gaseous fuels either alone or in combination with less than 10 percent coal/solid fossil fuel, and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, and no liquid fuels. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel during periods of gas curtailment or gas supply interruption of any duration are also included in this definition.

Unit designed to burn heavy liquid subcategory means a unit in the unit designed to burn liquid subcategory where at least 10 percent of the heat input from liquid fuels on an annual heat input basis comes from heavy liquids.

Unit designed to burn light liquid subcategory means a unit in the unit designed to burn liquid subcategory that is not part of the unit designed to burn heavy liquid subcategory.

Unit designed to burn liquid subcategory includes any boiler or process heater that burns any liquid fuel, but less than 10 percent coal/solid fossil fuel and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, either alone or in combination with gaseous fuels. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year are not included in this definition. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories during periods of gas curtailment or gas supply interruption of any duration are also not included in this definition.

Unit designed to burn liquid fuel that is a non-continental unit means an industrial, commercial, or institutional boiler or process heater meeting the definition of the unit designed to burn liquid subcategory located in the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Unit designed to burn solid fuel subcategory means any boiler or process heater that burns only solid fuels or at least 10 percent solid fuel on an annual heat input basis in combination with liquid fuels or gaseous fuels.

Useful thermal energy means energy (*i.e.,* steam, hot water, or process heat) that meets the minimum operating temperature, flow, and/or pressure required by any energy use system that uses energy provided by the affected boiler or process heater.

Vegetable oil means oils extracted from vegetation.

Voluntary Consensus Standards or VCS mean technical standards (*e.g.,* materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. EPA/Office of Air Quality Planning and Standards, by precedent, has only used VCS that are written in English. Examples of VCS bodies are: American Society of Testing and Materials (ASTM 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-B2959, (800) 262-1373, *http://www.astm.org*), American Society of Mechanical Engineers (ASME ASME, Three Park Avenue, New York, NY 10016-5990, (800) 843-2763, *http://www.asme.org*), International Standards Organization (ISO 1, ch. de la Voie-Creuse, Case postale 56, CH-1211 Geneva 20, Switzerland, + 41 22 749 01 11, *http://www.iso.org/iso/home.htm*), Standards Australia (AS Level 10, The Exchange Centre, 20 Bridge Street, Sydney, GPO Box 476, Sydney NSW 2001, + 61 2 9237 6171 *http://www.stadards.org.au*), British Standards Institution (BSI, 389 Chiswick High Road, London, W4 4AL, United Kingdom, + 44 (0)20 8996 9001, *http://www.bsigroup.com*), Canadian Standards Association (CSA 5060 Spectrum Way, Suite 100, Mississauga, Ontario L4W 5N6, Canada, 800-463-6727, *http://www.csa.ca*), European Committee for Standardization (CEN CENELEC Management Centre Avenue Marnix 17 B-1000 Brussels, Belgium + 32 2 550 08 11, *http://www.cen.eu/cen*), and German Engineering Standards (VDI VDI Guidelines Department, P.O. Box 10 11 39 40002, Duesseldorf, Germany, + 49 211 6214-230, *http://www.vdi.eu*). The types of standards that are not considered VCS are standards developed by: The United States, *e.g.,* California (CARB) and Texas (TCEQ); industry groups, such as American Petroleum Institute (API), Gas Processors Association (GPA), and Gas Research Institute (GRI); and other branches of the U.S. government, *e.g.,* Department of Defense (DOD) and Department of Transportation (DOT). This does not preclude EPA from using standards developed by groups that are not VCS bodies within their rule. When this occurs, EPA has done searches and reviews for VCS equivalent to these non-EPA methods.

Waste heat boiler means a device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat boilers are also referred to as heat recovery steam generators. Waste heat boilers are heat exchangers generating steam from incoming hot exhaust gas from an industrial (e.g., thermal oxidizer, kiln, furnace) or power (e.g., combustion turbine, engine) equipment. Duct burners are sometimes used to increase the temperature of the incoming hot exhaust gas.

Waste heat process heater means an enclosed device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat process heaters are also referred to as recuperative process heaters. This definition includes both fired and unfired waste heat process heaters.

Wet scrubber means any add-on air pollution control device that mixes an aqueous stream or slurry with the exhaust gases from a boiler or process heater to control emissions of particulate matter or to absorb and neutralize acid gases, such as hydrogen chloride. A wet scrubber creates an aqueous stream or slurry as a byproduct of the emissions control process.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

[78 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013; 80 FR 72817, Nov. 20, 2015; 87 FR 60846, Oct. 6, 2022]

Table 1 to Subpart DDDDD of Part 63 - Emission Limits for New or Reconstructed Boilers and Process Heaters [c]

As stated in § 63.7500, you must comply with the following applicable emission limits:

Table 1 to Subpart DDDDD of Part 63 - Emission Limits for New or Reconstructed Boilers and Process Heaters [c]

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling
1. Units in all subcategories designed to burn solid fuel	a. HCl	2.1E-04[a] lb per MMBtu of heat input	2.9E-04[a] lb per MMBtu of steam output or 2.7E-03[a] lb per MWh	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.0E-07[a] lb per MMBtu of heat input	8.7E-07[a] lb per MMBtu of steam output or 1.1E-05[a] lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
2. Units designed to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	1.1E-03 lb per MMBtu of steam output or 1.4E-02 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 2.9E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling**
4. Stokers/others designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3-percent oxygen[d], 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	1.2E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	590 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	6.1E-01 lb per MMBtu of steam output or 6.5 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	1.4E-02 lb per MMBtu of steam output or 1.9E-01 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 3.7E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3-percent oxygen	4.3E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (5.0E-03 lb per MMBtu of heat input)	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (5.2E-03 lb per MMBtu of steam output or 7.0E-02 lb per MWh)	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling
9. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	1.3E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	4.1E-03 lb per MMBtu of heat input; or (8.4E-06[a] lb per MMBtu of heat input)	5.0E-03 lb per MMBtu of steam output or 5.8E-02 lb per MWh; or (1.1E-05[a] lb per MMBtu of steam output or 1.2E-04[a] lb per MWh)	Collect a minimum of 3 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	220 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 10-day rolling average)	0.18 lb per MMBtu of steam output or 2.5 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (8.0E-03 lb per MMBtu of heat input)	3.1E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (8.1E-03 lb per MMBtu of steam output or 1.2E-01 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	330 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 10-day rolling average)	3.5E-01 lb per MMBtu of steam output or 3.6 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.5E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	3.4E-03 lb per MMBtu of steam output or 3.5E-02 lb per MWh; or (5.2E-05 lb per MMBtu of steam output or 5.5E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3-percent oxygen	1.1 lb per MMBtu of steam output or 1.0E+01 lb per MWh	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling
	b. Filterable PM (or TSM)	1.1E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	2.0E-02 lb per MMBtu of steam output or 1.6E-01 lb per MWh; or (5.1E-05 lb per MMBtu of steam output or 4.1E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	180 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3-percent oxygen[d], 30-day rolling average)	0.22 lb per MMBtu of steam output or 2.0 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	3.3E-02 lb per MMBtu of steam output or 3.7E-01 lb per MWh; or (5.5E-04 lb per MMBtu of steam output or 6.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	1.5E-04[a] lb per MMBtu of heat input	1.7E-04[a] lb per MMBtu of steam output or 2.1E-03[a] lb per MWh	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E-07[a] lb per MMBtu of heat input	5.3E-07[a] lb per MMBtu of steam output or 6.7E-06[a] lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.9E-03 lb per MMBtu of heat input; or (6.1E-06[a] lb per MMBtu of heat input)	2.1E-03 lb per MMBtu of steam output or 2.7E-02 lb per MWh; or (6.7E-6[a] lb per MMBtu of steam output or 8.5E-5[a] lb per MWh)	Collect a minimum of 3 dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.13 lb per MMBtu of steam output or 1.4 lb per MWh	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling
	b. Filterable PM (or TSM)	1.1E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	1.2E-03[a] lb per MMBtu of steam output or 1.6E-02[a] lb per MWh; or (3.2E-05 lb per MMBtu of steam output or 4.0E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	2.5E-02 lb per MMBtu of steam output or 3.2E-01 lb per MWh; or (9.4E-04 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 4 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	7.3E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	1.3E-02 lb per MMBtu of steam output or 7.6E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] If your affected source is a new or reconstructed affected source that commenced construction or reconstruction after June 4, 2010, and before April 1, 2013, you may comply with the emission limits in Table 11, 12, or 13 to this subpart until January 31, 2016. On and after January 31, 2016, but before October 6, 2025 you may comply with the emission limits in Table 14 to this subpart. On and after October 6, 2025 you must comply with the emission limits in this Table 1.

[d] An owner or operator may determine compliance with the carbon monoxide emissions limit using CO_2 as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit and must also take into account that the 3-percent oxygen correction is to be done on a dry basis. The methodology must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

[87 FR 60847, Oct. 6, 2022]

Table 2 to Subpart DDDDD of Part 63 - Emission Limits for Existing Boilers and Process Heaters [d]

As stated in § 63.7500, you must comply with the following applicable emission limits:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	2.0E-02 lb per MMBtu of heat input	2.3E-02 lb per MMBtu of steam output or 0.26 lb per MWh	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 120 liters per run.
	b. Mercury	5.4E-06 lb per MMBtu of heat input	6.2E-06 lb per MMBtu of steam output or 6.9E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
2. Units design to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	3.9E-02 lb per MMBtu of heat input; or (5.3E-05 lb per MMBtu of heat input)	4.1E-02 lb per MMBtu of steam output or 4.8E-01 lb per MWh; or (5.6E-05 lb per MMBtu of steam output or 6.5E-04 lb per MWh)	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
4. Stokers/others designed to burn coal/solid fossil fuel	a. CO (or CEMS)	150 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	0.14 lb per MMBtu of steam output or 1.6 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	1.3E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (720 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	1.1 lb per MMBtu of steam output or 13 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.4E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input)	4.0E-02 lb per MMBtu of steam output or 4.8E-01 lb per MWh; or (2.4E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh)	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3-percent oxygen	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-01 lb per MMBtu of heat input; or (5.0E-03 lb per MMBtu of heat input)	3.7E-01 lb per MMBtu of steam output or 4.5 lb per MWh; or (5.9E-03 lb per MMBtu of steam output or 7.0E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solid	a. CO (or CEMS)	210 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	2.1E-01 lb per MMBtu of steam output or 2.3 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	7.4E-03 lb per MMBtu of heat input; or (6.4E-05 lb per MMBtu of heat input)	9.2E-03 lb per MMBtu of steam output or 0.11 lb per MWh; or (8.0E-05 lb per MMBtu of steam output or 9.0E-04 lb per MWh)	Collect a minimum of 1 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 10-day rolling average)	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	4.1E-02 lb per MMBtu of heat input; or (8.0E-03 lb per MMBtu of heat input)	4.2E-02 lb per MMBtu of steam output or 5.8E-01 lb per MWh; or (8.1E-03 lb per MMBtu of steam output or 0.12 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	770 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 10-day rolling average)	8.4E-01 lb per MMBtu of steam output or 8.4 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
	b. Filterable PM (or TSM)	1.8E-01 lb per MMBtu of heat input; or (2.0E-03 lb per MMBtu of heat input)	2.5E-01 lb per MMBtu of steam output or 2.6 lb per MWh; or (2.8E-03 lb per MMBtu of steam output or 2.8E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solid	a. CO	1,100 ppm by volume on a dry basis corrected to 3-percent oxygen	2.4 lb per MMBtu of steam output or 12 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (5.8E-03 lb per MMBtu of heat input)	5.5E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (1.6E-02 lb per MMBtu of steam output or 8.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate units designed to burn biomass/bio-based solid	a. CO (or CEMS)	3,500 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	3.5 lb per MMBtu of steam output or 39 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	4.4E-01 lb per MMBtu of heat input; or (4.5E-04 lb per MMBtu of heat input)	5.5E-01 lb per MMBtu of steam output or 6.2 lb per MWh; or (5.7E-04 lb per MMBtu of steam output or 6.3E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	1.1E-03 lb per MMBtu of heat input	1.4E-03 lb per MMBtu of steam output or 1.6E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	7.3E-07 lb per MMBtu of heat input	8.8E-07 lb per MMBtu of steam output or 1.1E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B collect a minimum sample as specified in the method, for ASTM D6784[b] collect a minimum of 2 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. Filterable PM (or TSM)	5.9E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input)	7.2E-02 lb per MMBtu of steam output or 8.2E-01 lb per MWh; or (2.5E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.13 lb per MMBtu of steam output or 1.4 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	7.9E-03 lb per MMBtu of heat input; or (6.2E-05 lb per MMBtu of heat input)	9.6E-03 lb per MMBtu of steam output or 1.1E-01 lb per MWh; or (7.5E-05 lb per MMBtu of steam output or 8.6E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.2E-01 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	2.7E-01 lb per MMBtu of steam output or 3.1 lb per MWh; or (1.1E-03 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 2 dscm.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	d. Filterable PM (or TSM)	7.3E-03 lb per MMBtu of heat input or (2.1E-04 lb per MMBtu of heat input)	1.3E-02 lb per MMBtu of steam output or 7.6E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote a, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] An owner or operator may determine compliance with the carbon monoxide emissions limit be determined using CO_2 as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit and must also take into account that the 3-percent oxygen correction is to be done on a dry basis. The methodology must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

[d] Before October 6, 2025 you may comply with the emission limits in Table 15 to this subpart. On and after October 6, 2025], you must comply with the emission limits in this Table 2.

[87 FR 60849, Oct. 6, 2022]

Table 3 to Subpart DDDDD of Part 63 - Work Practice Standards

As stated in § 63.7500, you must comply with the following applicable work practice standards:

If your unit is . . .	You must meet the following . . .
1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater	Conduct a tune-up of the boiler or process heater every 5 years as specified in § 63.7540.

If your unit is . . .	**You must meet the following . . .**
2. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of less than 10 million Btu per hour in the unit designed to burn heavy liquid or unit designed to burn solid fuel subcategories; or a new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid	Conduct a tune-up of the boiler or process heater biennially as specified in § 63.7540.
3. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater	Conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under this subpart. Units in all other subcategories will conduct this tune-up as a work practice for dioxins/furans.
4. An existing boiler or process heater located at a major source facility, not including limited use units	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least one year between January 1, 2008 and the compliance date specified in § 63.7495 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in § 63.7575:
	a. A visual inspection of the boiler or process heater system.
	b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.
	c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.
	d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.
	e. A review of the facility's energy management program and provide recommendations for improvements consistent with the definition of energy management program, if identified.
	f. A list of cost-effective energy conservation measures that are within the facility's control.
	g. A list of the energy savings potential of the energy conservation measures identified.

If your unit is . . .	You must meet the following . . .
	h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.
5. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or 11 through 15 to this subpart during startup	a. You must operate all CMS during startup. b. For startup of a boiler or process heater, you must use one or a combination of the following clean fuels: natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis.
	c. You have the option of complying using either of the following work practice standards. (1) If you choose to comply using paragraph (1) of the definition of “startup” in § 63.7575, once you start firing fuels that are not clean fuels you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR (2) If you choose to comply using paragraph (2) of the definition of “startup” in § 63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels[a]. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in § 63.7505(e).
	d. You must comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in § 63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in § 63.7555.
6. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or Tables 11 through 15 to this subpart during shutdown	You must operate all CMS during shutdown. While firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device.

If your unit is . . .	You must meet the following . . .
	If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas.
	You must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in § 63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in § 63.7555.

[a] As specified in § 63.7555(d)(13), the source may request an alternative timeframe with the PM controls requirement to the permitting authority (state, local, or tribal agency) that has been delegated authority for this subpart by EPA. The source must provide evidence that (1) it is unable to safely engage and operate the PM control(s) to meet the “fuel firing + 1 hour” requirement and (2) the PM control device is appropriately designed and sized to meet the filterable PM emission limit. It is acknowledged that there may be another control device that has been installed other than ESP that provides additional PM control (e.g., scrubber).

[87 FR 60852, Oct. 6, 2022]

Table 4 to Subpart DDDDD of Part 63 - Operating Limits for Boilers and Process Heaters

As stated in § 63.7500, you must comply with the applicable operating limits:

Table 4 to Subpart DDDDD of Part 63 - Operating Limits for Boilers and Process Heaters

When complying with a numerical emission limit under Table 1, 2, 11, 12, 13, 14, or 15 of this subpart using . . .	You must meet these operating limits. . .
1. Wet PM scrubber control on a boiler or process heater not using a PM CPMS	Maintain the 30-day rolling average pressure drop and the 30-day rolling average liquid flow rate at or above the lowest one-hour average pressure drop and the lowest one-hour average liquid flow rate, respectively, measured during the performance test demonstrating compliance with the PM emission limitation according to § 63.7530(b) and Table 7 to this subpart.
2. Wet acid gas (HCl) scrubber[a] control on a boiler or process heater not using a HCl CEMS	Maintain the 30-day rolling average effluent pH at or above the lowest one-hour average pH and the 30-day rolling average liquid flow rate at or above the lowest one-hour average liquid flow rate measured during the performance test demonstrating compliance with the HCl emission limitation according to § 63.7530(b) and Table 7 to this subpart.
3. Fabric filter control on a boiler or process heater not using a PM CPMS	a. Maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average); or
	b. Install and operate a bag leak detection system according to § 63.7525 and operate the fabric filter such that the bag leak detection system alert is not activated more than 5 percent of the operating time during each 6-month period.

When complying with a numerical emission limit under Table 1, 2, 11, 12, 13, 14, or 15 of this subpart using . . .	**You must meet these operating limits. . .**
4. Electrostatic precipitator control on a boiler or process heater not using a PM CPMS	a. This option is for boilers and process heaters that operate dry control systems (*i.e.*, an ESP without a wet scrubber). Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average).
	b. This option is only for boilers and process heaters not subject to PM CPMS or continuous compliance with an opacity limit (*i.e.*, dry ESP). Maintain the 30-day rolling average total secondary electric power input of the electrostatic precipitator at or above the operating limits established during the performance test according to § 63.7530(b) and Table 7 to this subpart.
5. Dry scrubber or carbon injection control on a boiler or process heater not using a mercury CEMS	Maintain the minimum sorbent or carbon injection rate as defined in § 63.7575 of this subpart.
6. Any other add-on air pollution control type on a boiler or process heater not using a PM CPMS	This option is for boilers and process heaters that operate dry control systems. Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average).
7. Performance testing	For boilers and process heaters that demonstrate compliance with a performance test, maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance test.
8. Oxygen analyzer system	For boilers and process heaters subject to a CO emission limit that demonstrate compliance with an O_2 analyzer system as specified in § 63.7525(a), maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen concentration measured during the CO performance test, as specified in Table 8. This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a).
9. SO_2 CEMS	For boilers or process heaters subject to an HCl emission limit that demonstrate compliance with an SO_2 CEMS, maintain the 30-day rolling average SO_2 emission rate at or below the highest hourly average SO_2 concentration measured during the HCl performance test, as specified in Table 8.

[a] A wet acid gas scrubber is a control device that removes acid gases by contacting the combustion gas with an alkaline slurry or solution. Alkaline reagents include, but not limited to, lime, limestone and sodium.

[80 FR 72874, Nov. 20, 2015, as amended at 87 FR 60853, Oct. 6, 2022]

Table 5 to Subpart DDDDD of Part 63 - Performance Testing Requirements

As stated in § 63.7520, you must comply with the following requirements for performance testing for existing, new or reconstructed affected sources:

To conduct a performance test for the following pollutant . . .	You must. . .	Using, as appropriate . . .
1. Filterable PM	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 to part 60 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-2 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the PM emission concentration	Method 5 or 17 (positive pressure fabric filters must use Method 5D) at 40 CFR part 60, appendix A-3 or A-6 of this chapter.
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
2. TSM	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the TSM emission concentration	Method 29 at 40 CFR part 60, appendix A-8 of this chapter
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
3. Hydrogen chloride	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-2 of this chapter.

To conduct a performance test for the following pollutant . . .	You must. . .	Using, as appropriate . . .
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-2 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the hydrogen chloride emission concentration	Method 26 or 26A (M26 or M26A) at 40 CFR part 60, appendix A-8 of this chapter.
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
4. Mercury	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the mercury emission concentration	Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784.[a]
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
5. CO	a. Select the sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine oxygen concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-3 of this chapter, or ASTM D6522-00 (Reapproved 2005), or ANSI/ASME PTC 19.10-1981.[a]
	c. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	d. Measure the CO emission concentration	Method 10 at 40 CFR part 60, appendix A-4 of this chapter. Use a measurement span value of 2 times the concentration of the applicable emission limit.

[a] Incorporated by reference, see § 63.14.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7200, Jan. 31, 2013; 80 FR 72825, Nov. 20, 2015]

Table 6 to Subpart DDDDD of Part 63 - Fuel Analysis Requirements

As stated in § 63.7521, you must comply with the following requirements for fuel analysis testing for existing, new or reconstructed affected sources. However, equivalent methods (as defined in § 63.7575) may be used in lieu of the prescribed methods at the discretion of the source owner or operator:

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
1. Mercury	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192[a], or ASTM D7430[a], or ASTM D6883[a], or ASTM D2234/D2234M[a] (for coal) or EPA 1631 or EPA 1631E or ASTM D6323[a] (for solid), or EPA 821-R-01-013 (for liquid or solid), or ASTM D4177[a] (for liquid), or ASTM D4057[a] (for liquid), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), ASTM D5198[a] (for biomass), or EPA 3050[a] (for solid fuel), or EPA 821-R-01-013[a] (for liquid or solid), or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), or ASTM D5864[a] for liquids and other solids, or ASTM D240[a] or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173[a], ASTM E871[a], or ASTM D5864[a], or ASTM D240[a], or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or equivalent.
	f. Measure mercury concentration in fuel sample	ASTM D6722[a] (for coal), EPA SW-846-7471B[a] or EPA 1631 or EPA 1631E[a] (for solid samples), or EPA SW-846-7470A[a] or EPA SW-846-7471B[a] (for liquid samples), or EPA 821-R-01-013[a] (for liquid or solid), or equivalent.
	g. Convert concentration into units of pounds of mercury per MMBtu of heat content	For fuel mixtures use Equation 8 in § 63.7530.
2. HCl	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192[a], or ASTM D7430[a], or ASTM D6883[a], or ASTM D2234/D2234M[a] (for coal) or ASTM D6323[a] (for coal or biomass), ASTM D4177[a] (for liquid fuels) or ASTM D4057[a] (for liquid fuels), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), or ASTM D5198[a] (for biomass), or EPA 3050[a] or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), ASTM D5864[a], ASTM D240[a] or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173[a] or ASTM E871[a], or D5864[a], or ASTM D240[a], or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or equivalent.
	f. Measure chlorine concentration in fuel sample	EPA SW-846-9250[a], ASTM D6721[a], ASTM D4208[a] (for coal), or EPA SW-846-5050[a] or ASTM E776[a] (for solid fuel), or EPA SW-846-9056[a] or SW-846-9076[a] (for solids or liquids) or equivalent.

To conduct a fuel analysis for the following pollutant . . .	**You must . . .**	**Using . . .**
	g. Convert concentrations into units of pounds of HCl per MMBtu of heat content	For fuel mixtures use Equation 7 in § 63.7530 and convert from chlorine to HCl by multiplying by 1.028.
3. Mercury Fuel Specification for other gas 1 fuels	a. Measure mercury concentration in the fuel sample and convert to units of micrograms per cubic meter, or	Method 30B (M30B) at 40 CFR part 60, appendix A-8 of this chapter or ASTM D5954[a], ASTM D6350[a], ISO 6978-1:2003(E)[a], or ISO 6978-2:2003(E)[a], or EPA-1631[a] or equivalent.
	b. Measure mercury concentration in the exhaust gas when firing only the other gas 1 fuel is fired in the boiler or process heater	Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A or Method 102 at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784[a] or equivalent.
4. TSM	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192[a], or ASTM D7430[a], or ASTM D6883[a], or ASTM D2234/D2234M[a] (for coal) or ASTM D6323[a] (for coal or biomass), or ASTM D4177[a], (for liquid fuels), or ASTM D4057[a] (for liquid fuels), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B[a] (for solid samples), ASTM D2013/D2013M[a] (for coal), ASTM D5198[a] or TAPPI T266[a] (for biomass), or EPA 3050[a] or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865[a] (for coal) or ASTM E711[a] (for biomass), or ASTM D5864[a] for liquids and other solids, or ASTM D240[a] or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173[a] or ASTM E871[a], or D5864[a], or ASTM D240[a], or ASTM D95[a] (for liquid fuels), or ASTM D4006[a] (for liquid fuels), or ASTM D4177[a] (for liquid fuels) or ASTM D4057[a] (for liquid fuels), or equivalent.
	f. Measure TSM concentration in fuel sample	ASTM D3683[a], or ASTM D4606[a], or ASTM D6357[a] or EPA 200.8[a] or EPA SW-846-6020[a], or EPA SW-846-6020A[a], or EPA SW-846-6010C[a], EPA 7060[a] or EPA 7060A[a] (for arsenic only), or EPA SW-846-7740[a] (for selenium only).
	g. Convert concentrations into units of pounds of TSM per MMBtu of heat content	For fuel mixtures use Equation 9 in § 63.7530.

[a] Incorporated by reference, see § 63.14.

[83 FR 56725, Nov. 14, 2018]

Table 7 to Subpart DDDDD of Part 63 - Establishing Operating Limits [ab]

As stated in § 63.7520, you must comply with the following requirements for establishing operating limits:

Table 7 to Subpart DDDDD of Part 63 - Establishing Operating Limits [ab]

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
1. PM, TSM, or mercury	a. Wet scrubber operating parameters	i. Establish a site-specific minimum scrubber pressure drop and minimum flow rate operating limit according to § 63.7530(b)	(1) Data from the scrubber pressure drop and liquid flow rate monitors and the PM, TSM, or mercury performance test	(a) You must collect scrubber pressure drop and liquid flow rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the lowest hourly average scrubber pressure drop and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
	b. Electrostatic precipitator operating parameters (option only for units that operate wet scrubbers)	i. Establish a site-specific minimum total secondary electric power input according to § 63.7530(b)	(1) Data from the voltage and secondary amperage monitors during the PM or mercury performance test	(a) You must collect secondary voltage and secondary amperage for each ESP cell and calculate total secondary electric power input data every 15 minutes during the entire period of the performance tests.
				(b) Determine the average total secondary electric power input by computing the hourly averages using all of the 15-minute readings taken during each performance test.
	c. Opacity	i. Establish a site-specific maximum opacity level	(1) Data from the opacity monitoring system during the PM performance test	(a) You must collect opacity readings every 15 minutes during the entire period of the performance tests.
				(b) Determine the average hourly opacity reading by computing the hourly averages using all of the 15-minute readings taken during each performance test.

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
				(c) Determine the highest hourly average opacity reading measured during the test run demonstrating compliance with the PM (or TSM) emission limitation.
2. HCl	a. Wet scrubber operating parameters	i. Establish site-specific minimum effluent pH and flow rate operating limits according to § 63.7530(b)	(1) Data from the pH and liquid flow-rate monitors and the HCl performance test	(a) You must collect pH and liquid flow-rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average pH and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
	b. Dry scrubber operating parameters	i. Establish a site-specific minimum sorbent injection rate operating limit according to § 63.7530(b). If different acid gas sorbents are used during the HCl performance test, the average value for each sorbent becomes the site-specific operating limit for that sorbent	(1) Data from the sorbent injection rate monitors and HCl or mercury performance test	(a) You must collect sorbent injection rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average sorbent injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
				(c) Determine the lowest hourly average of the three test run averages established during the performance test as your operating limit. When your unit operates at lower loads, multiply your sorbent injection rate by the load fraction, as defined in § 63.7575, to determine the required injection rate.

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
	c. Alternative Maximum SO_2 emission rate	i. Establish a site-specific maximum SO_2 emission rate operating limit according to § 63.7530(b)	(1) Data from SO_2 CEMS and the HCl performance test	(a) You must collect the SO_2 emissions data according to § 63.7525(m) during the most recent HCl performance tests.
				(b) The maximum SO_2 emission rate is equal to the highest hourly average SO_2 emission rate measured during the most recent HCl performance tests.
3. Mercury	a. Activated carbon injection	i. Establish a site-specific minimum activated carbon injection rate operating limit according to § 63.7530(b)	(1) Data from the activated carbon rate monitors and mercury performance test	(a) You must collect activated carbon injection rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average activated carbon injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
				(c) Determine the lowest hourly average established during the performance test as your operating limit. When your unit operates at lower loads, multiply your activated carbon injection rate by the load fraction, as defined in § 63.7575, to determine the required injection rate.
4. Carbon monoxide for which compliance is demonstrated by a performance test	a. Oxygen	i. Establish a unit-specific limit for minimum oxygen level according to § 63.7530(b)	(1) Data from the oxygen analyzer system specified in § 63.7525(a)	(a) You must collect oxygen data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average oxygen concentration by computing the hourly averages using all of the 15-minute readings taken during each performance test.

If you have an applicable emission limit for . . .	**And your operating limits are based on . . .**	**You must . . .**	**Using . . .**	**According to the following requirements**
				(c) Determine the lowest hourly average established during the performance test as your minimum operating limit.
5. Any pollutant for which compliance is demonstrated by a performance test	a. Boiler or process heater operating load	i. Establish a unit specific limit for maximum operating load according to § 63.7520(c)	(1) Data from the operating load monitors or from steam generation monitors	(a) You must collect operating load or steam generation data every 15 minutes during the entire period of the performance test.
				(b) Determine the average operating load by computing the hourly averages using all of the 15-minute readings taken during each performance test.
				(c) Determine the highest hourly average of the three test run averages during the performance test, and multiply this by 1.1 (110 percent) as your operating limit.

[a] Operating limits must be confirmed or reestablished during performance tests.

[b] If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests. For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests. For maximum operating load, if you conduct multiple performance tests, you must set the maximum operating load at the lower of the maximum values established during the performance tests.

[87 FR 60853, Oct. 6, 2022]

Table 8 to Subpart DDDDD of Part 63 - Demonstrating Continuous Compliance

As stated in § 63.7540, you must show continuous compliance with the emission limitations for each boiler or process heater according to the following:

If you must meet the following operating limits or work practice standards . . .	**You must demonstrate continuous compliance by . . .**
1. Opacity	a. Collecting the opacity monitoring system data according to § 63.7525(c) and § 63.7535; and
	b. Reducing the opacity monitoring data to 6-minute averages; and
	c. Maintaining daily block average opacity to less than or equal to 10 percent or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation.

If you must meet the following operating limits or work practice standards . . .	**You must demonstrate continuous compliance by . . .**
2. PM CPMS	a. Collecting the PM CPMS output data according to § 63.7525;
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average PM CPMS output data to less than the operating limit established during the performance test according to § 63.7530(b)(4).
3. Fabric Filter Bag Leak Detection Operation	Installing and operating a bag leak detection system according to § 63.7525 and operating the fabric filter such that the requirements in § 63.7540(a)(7) are met.
4. Wet Scrubber Pressure Drop and Liquid Flow-rate	a. Collecting the pressure drop and liquid flow rate monitoring system data according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average pressure drop and liquid flow-rate at or above the operating limits established during the performance test according to § 63.7530(b).
5. Wet Scrubber pH	a. Collecting the pH monitoring system data according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average pH at or above the operating limit established during the performance test according to § 63.7530(b).
6. Dry Scrubber Sorbent or Carbon Injection Rate	a. Collecting the sorbent or carbon injection rate monitoring system data for the dry scrubber according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average sorbent or carbon injection rate at or above the minimum sorbent or carbon injection rate as defined in § 63.7575.
7. Electrostatic Precipitator Total Secondary Electric Power Input	a. Collecting the total secondary electric power input monitoring system data for the electrostatic precipitator according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average total secondary electric power input at or above the operating limits established during the performance test according to § 63.7530(b).
8. Emission limits using fuel analysis	a. Conduct monthly fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart; and
	b. Reduce the data to 12-month rolling averages; and
	c. Maintain the 12-month rolling average at or below the applicable emission limit for HCl or mercury or TSM in Tables 1 and 2 or 11 through 15 to this subpart.
	d. Calculate the HCl, mercury, and/or TSM emission rate from the boiler or process heater in units of lb/MMBtu using Equation 15 and Equations 16, 17, and/or 18 in § 63.7530.
9. Oxygen content	a. Continuously monitor the oxygen content using an oxygen analyzer system according to § 63.7525(a). This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a)(7).
	b. Reducing the data to 30-day rolling averages; and

If you must meet the following operating limits or work practice standards . . .	You must demonstrate continuous compliance by . . .
	c. Maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen level measured during the CO performance test.
10. Boiler or process heater operating load	a. Collecting operating load data or steam generation data every 15 minutes. b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average operating load such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance test according to § 63.7520(c).
11. SO_2 emissions using SO_2 CEMS	a. Collecting the SO_2 CEMS output data according to § 63.7525;
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average SO_2 CEMS emission rate to a level at or below the highest hourly SO_2 rate measured during the HCl performance test according to § 63.7530.

[78 FR 7204, Jan. 31, 2013, as amended at 80 FR 72829, Nov. 20, 2015; 87 FR 60855, Oct. 6, 2022]

Table 9 to Subpart DDDDD of Part 63 - Reporting Requirements

As stated in § 63.7550, 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. Information required in § 63.7550(c)(1) through (5); and	Semiannually, annually, biennially, or every 5 years according to the requirements in § 63.7550(b).
	b. If there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards for periods of startup and shutdown in Table 3 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMSs were out-of-control during the reporting period; and	
	c. If you have a deviation from any emission limitation (emission limit and operating limit) where you are not using a CMS to comply with that emission limit or operating limit, or a deviation from a work practice standard for periods of startup and shutdown, during the reporting period, the report must contain the information in § 63.7550(d); and	
	d. If there were periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), or otherwise not operating, the report must contain the information in § 63.7550(e)	

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013; 80 FR 72830, Nov. 20, 2015]

Table 10 to Subpart DDDDD of Part 63 - Applicability of General Provisions to Subpart DDDDD

As stated in § 63.7565, you must comply with the applicable General Provisions according to the following:

Citation	Subject	Applies to subpart DDDDD
§ 63.1	Applicability	Yes.
§ 63.2	Definitions	Yes. Additional terms defined in § 63.7575
§ 63.3	Units and Abbreviations	Yes.
§ 63.4	Prohibited Activities and Circumvention	Yes.
§ 63.5	Preconstruction Review and Notification Requirements	Yes.
§ 63.6(a), (b)(1)-(b)(5), (b)(7), (c)	Compliance with Standards and Maintenance Requirements	Yes.
§ 63.6(e)(1)(i)	General duty to minimize emissions.	No. See § 63.7500(a)(3) for the general duty requirement.
§ 63.6(e)(1)(ii)	Requirement to correct malfunctions as soon as practicable.	No.
§ 63.6(e)(3)	Startup, shutdown, and malfunction plan requirements.	No.
§ 63.6(f)(1)	Startup, shutdown, and malfunction exemptions for compliance with non-opacity emission standards.	No.
§ 63.6(f)(2) and (3)	Compliance with non-opacity emission standards.	Yes.
§ 63.6(g)	Use of alternative standards	Yes, except § 63.7555(d)(13) specifies the procedure for application and approval of an alternative timeframe with the PM controls requirement in the startup work practice (2).
§ 63.6(h)(1)	Startup, shutdown, and malfunction exemptions to opacity standards.	No. See § 63.7500(a).
§ 63.6(h)(2) to (h)(9)	Determining compliance with opacity emission standards	No. Subpart DDDDD specifies opacity as an operating limit not an emission standard.
§ 63.6(i)	Extension of compliance	Yes. Note: Facilities may also request extensions of compliance for the installation of combined heat and power, waste heat recovery, or gas pipeline or fuel feeding infrastructure as a means of complying with this subpart.
§ 63.6(j)	Presidential exemption.	Yes.
§ 63.7(a), (b), (c), and (d)	Performance Testing Requirements	Yes.

Citation	**Subject**	**Applies to subpart DDDDD**
§ 63.7(e)(1)	Conditions for conducting performance tests	No. Subpart DDDDD specifies conditions for conducting performance tests at § 63.7520(a) to (c).
§ 63.7(e)(2)-(e)(9), (f), (g), and (h)	Performance Testing Requirements	Yes.
§ 63.8(a) and (b)	Applicability and Conduct of Monitoring	Yes.
§ 63.8(c)(1)	Operation and maintenance of CMS	Yes.
§ 63.8(c)(1)(i)	General duty to minimize emissions and CMS operation	No. See § 63.7500(a)(3).
§ 63.8(c)(1)(ii)	Operation and maintenance of CMS	Yes.
§ 63.8(c)(1)(iii)	Startup, shutdown, and malfunction plans for CMS	No.
§ 63.8(c)(2) to (c)(9)	Operation and maintenance of CMS	Yes.
§ 63.8(d)(1) and (2)	Monitoring Requirements, Quality Control Program	Yes.
§ 63.8(d)(3)	Written procedures for CMS	Yes, except for the last sentence, which refers to a startup, shutdown, and malfunction plan. Startup, shutdown, and malfunction plans are not required.
§ 63.8(e)	Performance evaluation of a CMS	Yes.
§ 63.8(f)	Use of an alternative monitoring method.	Yes.
§ 63.8(g)	Reduction of monitoring data	Yes.
§ 63.9	Notification Requirements	Yes.
§ 63.10(a), (b)(1)	Recordkeeping and Reporting Requirements	Yes.
§ 63.10(b)(2)(i)	Recordkeeping of occurrence and duration of startups or shutdowns	Yes.
§ 63.10(b)(2)(ii)	Recordkeeping of malfunctions	No. See § 63.7555(d)(7) for recordkeeping of occurrence and duration and § 63.7555(d)(8) for actions taken during malfunctions.
§ 63.10(b)(2)(iii)	Maintenance records	Yes.
§ 63.10(b)(2)(iv) and (v)	Actions taken to minimize emissions during startup, shutdown, or malfunction	No.
§ 63.10(b)(2)(vi)	Recordkeeping for CMS malfunctions	Yes.
§ 63.10(b)(2)(vii) to (xiv)	Other CMS requirements	Yes.

Citation	Subject	Applies to subpart DDDDD
§ 63.10(b)(3)	Recordkeeping requirements for applicability determinations	No.
§ 63.10(c)(1) to (9)	Recordkeeping for sources with CMS	Yes.
§ 63.10(c)(10) and (11)	Recording nature and cause of malfunctions, and corrective actions	No. See § 63.7555(d)(7) for recordkeeping of occurrence and duration and § 63.7555(d)(8) for actions taken during malfunctions.
§ 63.10(c)(12) and (13)	Recordkeeping for sources with CMS	Yes.
§ 63.10(c)(15)	Use of startup, shutdown, and malfunction plan	No.
§ 63.10(d)(1) and (2)	General reporting requirements	Yes.
§ 63.10(d)(3)	Reporting opacity or visible emission observation results	No.
§ 63.10(d)(4)	Progress reports under an extension of compliance	Yes.
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No. See § 63.7550(c)(11) for malfunction reporting requirements.
§ 63.10(e)	Additional reporting requirements for sources with CMS	Yes.
§ 63.10(f)	Waiver of recordkeeping or reporting requirements	Yes.
§ 63.11	Control Device Requirements	No.
§ 63.12	State Authority and Delegation	Yes.
§ 63.13-63.16	Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions	Yes.
§ 63.1(a)(5),(a)(7)-(a)(9), (b)(2), (c)(3)-(4), (d), 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv), 63.8(a)(3), 63.9(b)(3), (h)(4), 63.10(c)(2)-(4), (c)(9).	Reserved	No.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013; 80 FR 72830, Nov. 20, 2015]

Table 11 to Subpart DDDDD of Part 63 - Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After June 4, 2010, and Before May 20, 2011

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	0.022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
2. Units in all subcategories designed to burn solid fuel that combust at least 10 percent biomass/bio-based solids on an annual heat input basis and less than 10 percent coal/solid fossil fuels on an annual heat input basis	a. Mercury	8.0E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
3. Units in all subcategories designed to burn solid fuel that combust at least 10 percent coal/solid fossil fuels on an annual heat input basis and less than 10 percent biomass/bio-based solids on an annual heat input basis	a. Mercury	2.0E-06 lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
4. Units design to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
5. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
6. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS).	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen ,[c] 10-day rolling average)	1 hr minimum sampling time.
7. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
8. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
9. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
10. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	560 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run
11. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run
12. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
13. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,010 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	8.0E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
14. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
15. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run
16. Units designed to burn liquid fuel	a. HCl	4.4E-04 lb per MMBtu of heat input	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run
	b. Mercury.	4.8E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
17. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-02 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
18. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. Filterable PM (or TSM)	2.0E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run
19. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	Collect a minimum of 4 dscm per run
20. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provision of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] An owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The methodology must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

[87 FR 60855, Oct. 6, 2022]

Table 12 to Subpart DDDDD of Part 63 - Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After May 20, 2011, and Before December 23, 2011

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	0.022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	3.5E-06[a] lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
2. Units design to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
4. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	260 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	470 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
14. Units designed to burn liquid fuel	a. HCl	4.4E-04 lb per MMBtu of heat input	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-02 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	Collect a minimum of 4 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provision of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] An owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The methodology must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

[87 FR 60857, Oct. 6, 2022]

Table 13 to Subpart DDDDD of Part 63 - Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After December 23, 2011, and Before April 1, 2013

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	0.022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.6E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
2. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.8E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
3. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.8E-02 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
4. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
5. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
6. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (410 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
7. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
8. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
9. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
10. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	810 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.6E-02 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
11. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
12. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
13. Units designed to burn liquid fuel	a. HCl	1.2E-03 lb per MMBtu of heat input	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.9E-07[a] lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b]collect a minimum of 4 dscm.
14. Units designed to burn heavy liquid fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (18 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-03 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
15. Units designed to burn light liquid fuel	a. CO (or CEMS)	130[a] ppm by volume on a dry basis corrected to 3 percent oxygen; or (60 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 1-day block average).	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. Filterable PM (or TSM)	1.1E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
16. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test; or (91 ppm by volume on a dry basis corrected to 3 percent oxygen,[c] 3-hour rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
17. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b]collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit and you are not required to conduct testing for CEMS or CPMS monitor certification, you can skip testing according to § 63.7515 if all of the other provision of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] An owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The methodology must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

[87 FR 60859, Oct. 6, 2022]

Table 14 to Subpart DDDDD of Part 63 - Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters [c]

As stated in § 63.7500, you may continue to comply with the following applicable emission limits until October 6, 2025:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel.	a. HCl	2.2E-02 lb per MMBtu of heat input	2.5E-02 lb per MMBtu of steam output or 0.28 lb per MWh	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.0E-07[a] lb per MMBtu of heat input	8.7E-07[a] lb per MMBtu of steam output or 1.1E-05[a] lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
2. Units designed to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	1.1E-03 lb per MMBtu of steam output or 1.4E-02 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 2.9E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
4. Stokers/others designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3- percent oxygen,[d] 30-day rolling average)	1.2E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	5.8E-01 lb per MMBtu of steam output or 6.8 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 3.7E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3-percent oxygen	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (4.2E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh)	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
9. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	2.2E-01 lb per MMBtu of steam output or 2.6 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05[a] lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 0.14 lb per MWh; or (1.1E-04[a] lb per MMBtu of steam output or 1.2E-03[a] lb per MWh)	Collect a minimum of 3 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 10-day rolling average)	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	3.1E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	330 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 10-day rolling average)	3.5E-01 lb per MMBtu of steam output or 3.6 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	4.3E-03 lb per MMBtu of steam output or 4.5E-02 lb per MWh; or (5.2E-05 lb per MMBtu of steam output or 5.5E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3-percent oxygen	1.1 lb per MMBtu of steam output or 1.0E+01 lb per MWh	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	3.0E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (5.1E-05 lb per MMBtu of steam output or 4.1E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,100 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3-percent oxygen,[d] 30-day rolling average)	1.4 lb per MMBtu of steam output or 12 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	3.3E-02 lb per MMBtu of steam output or 3.7E-01 lb per MWh; or (5.5E-04 lb per MMBtu of steam output or 6.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	4.4E-04 lb per MMBtu of heat input	4.8E-04 lb per MMBtu of steam output or 6.1E-03 lb per MWh	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E-07[a] lb per MMBtu of heat input	5.3E-07[a] lb per MMBtu of steam output or 6.7E-06[a] lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 4 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-02 lb per MMBtu of heat input; or (7.5E-05[a] lb per MMBtu of heat input)	1.5E-02 lb per MMBtu of steam output or 1.8E-01 lb per MWh; or (8.2E-05[a] lb per MMBtu of steam output or 1.1E-03[a] lb per MWh)	Collect a minimum of 3 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.13 lb per MMBtu of steam output or 1.4 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03[a] lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	1.2E-03[a] lb per MMBtu of steam output or 1.6E-02[a] lb per MWh; or (3.2E-05 lb per MMBtu of steam output or 4.0E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	2.5E-02 lb per MMBtu of steam output or 3.2E-01 lb per MWh; or (9.4E-04 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 4 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.

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[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if

all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] If your affected source is a new or reconstructed affected source that commenced construction or reconstruction after June 4, 2010, and before April 1, 2013, you may comply with the emission limits in Table 11, 12, or 13 to this subpart until January 31, 2016. On and after January 31, 2016, but before October 6, 2025 you may comply with the emission limits in this Table 14. On and after October 6, 2025, you must comply with the emission limits in Table 1 to this subpart.

[d] An owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The methodology must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

[87 FR 60860, Oct. 6, 2022]

Table 15 to Subpart DDDDD of Part 63 - Alternative Emission Limits for Existing Boilers and Process Heaters[d]

As stated in § 63.7500, you may continue to comply with following emission limits until October 6, 2025:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	2.2E-02 lb per MMBtu of heat input	2.5E-02 lb per MMBtu of steam output or 0.27 lb per MWh	For M26A, Collect a minimum of 1 dscm per run; for M26, collect a minimum of 120 liters per run.
	b. Mercury	5.7E-06 lb per MMBtu of heat input	6.4E-06 lb per MMBtu of steam output or 7.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 3 dscm.
2. Units design to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	4.0E-02 lb per MMBtu of heat input; or (5.3E-05 lb per MMBtu of heat input)	4.2E-02 lb per MMBtu of steam output or 4.9E-01 lb per MWh; or (5.6E-05 lb per MMBtu of steam output or 6.5E-04 lb per MWh)	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
4. Stokers/others designed to burn coal/solid fossil fuel	a. CO (or CEMS)	160 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3- percent oxygen,[c] 30-day rolling average)	0.14 lb per MMBtu of steam output or 1.7 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3- percent oxygen,[c] 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	1.3E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (720 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 30-day rolling average)	1.4 lb per MMBtu of steam output or 17 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.7E-02 lb per MMBtu of heat input; or (2.4E-04 lb per MMBtu of heat input)	4.3E-02 lb per MMBtu of steam output or 5.2E-01 lb per MWh; or (2.8E-04 lb per MMBtu of steam output or 3.4E-04 lb per MWh)	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3-percent oxygen	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	3.7E-01 lb per MMBtu of steam output or 4.5 lb per MWh; or (4.6E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solid	a. CO (or CEMS)	470 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3- percent oxygen,[c] 30-day rolling average)	4.6E-01 lb per MMBtu of steam output or 5.2 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-01 lb per MMBtu of heat input; or (1.2E-03 lb per MMBtu of heat input)	1.4E-01 lb per MMBtu of steam output or 1.6 lb per MWh; or (1.5E-03 lb per MMBtu of steam output or 1.7E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 10-day rolling average)	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	5.2E-02 lb per MMBtu of steam output or 7.1E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	770 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3-percent oxygen,[c] 10-day rolling average)	8.4E-01 lb per MMBtu of steam output or 8.4 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	b. Filterable PM (or TSM)	2.8E-01 lb per MMBtu of heat input; or (2.0E-03 lb per MMBtu of heat input)	3.9E-01 lb per MMBtu of steam output or 3.9 lb per MWh; or (2.8E-03 lb per MMBtu of steam output or 2.8E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solid	a. CO	1,100 ppm by volume on a dry basis corrected to 3-percent oxygen	2.4 lb per MMBtu of steam output or 12 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (5.8E-03 lb per MMBtu of heat input)	5.5E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (1.6E-02 lb per MMBtu of steam output or 8.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate units designed to burn biomass/bio-based solid	a. CO (or CEMS)	3,500 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3- percent oxygen,[c] 30-day rolling average)	3.5 lb per MMBtu of steam output or 39 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	4.4E-01 lb per MMBtu of heat input; or (4.5E-04 lb per MMBtu of heat input)	5.5E-01 lb per MMBtu of steam output or 6.2 lb per MWh; or (5.7E-04 lb per MMBtu of steam output or 6.3E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	1.1E-03 lb per MMBtu of heat input	1.4E-03 lb per MMBtu of steam output or 1.6E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	2.0E-06 lb per MMBtu of heat input	2.5E-06 lb per MMBtu of steam output or 2.8E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B collect a minimum sample as specified in the method, for ASTM D6784[b] collect a minimum of 2 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
	b. Filterable PM (or TSM)	6.2E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input)	7.5E-02 lb per MMBtu of steam output or 8.6E-01 lb per MWh; or (2.5E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.13 lb per MMBtu of steam output or 1.4 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	7.9E-03 lb per MMBtu of heat input; or (6.2E-05 lb per MMBtu of heat input)	9.6E-03 lb per MMBtu of steam output or 1.1E-01 lb per MWh; or (7.5E-05 lb per MMBtu of steam output or 8.6E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.7E-01 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	3.3E-01 lb per MMBtu of steam output or 3.8 lb per MWh; or (1.1E-03 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3-percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784[b] collect a minimum of 2 dscm.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input or (2.1E-04 lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	Collect a minimum of three dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote a, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] An owner or operator may determine compliance with the carbon monoxide emissions limit using carbon dioxide as a diluent correction in place of oxygen as described in § 63.7525(a)(1). EPA Method 19 F-factors in 40 CFR part 60, appendix A-7, and EPA Method 19 equations in 40 CFR part 60, appendix A-7, must be used to generate the appropriate CO_2 correction percentage for the fuel type burned in the unit, and must also take into account that the 3% oxygen correction is to be done on a dry basis. The methodology must account for any CO_2 being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc. This methodology must be detailed in the site-specific monitoring plan developed according to § 63.7505(d).

[d] Before October 6, 2025 you may comply with the emission limits in this Table 15. On and after October 6, 2025, you must comply with the emission limits in Table 2 to this subpart.

[87 FR 60863, Oct. 6, 2022]

Attachment C

Part 70 Operating Permit No: 081-47176-00005

Electronic Code of Federal Regulations

Title 40: Protection of Environment

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

Subpart JJJJ—National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating

Source: 67 FR 72341, Dec. 4, 2002, unless otherwise noted.

What This Subpart Covers

§ 63.3280 What is in this subpart?

This subpart describes the actions you must take to reduce emissions of organic hazardous air pollutants (HAP) from paper and other web coating operations. This subpart establishes emission standards for web coating lines and specifies what you must do to comply if you own or operate a facility with web coating lines that is a major source of HAP. Certain requirements apply to all who are subject to this subpart; others depend on the means you use to comply with an emission standard.

§ 63.3290 Does this subpart apply to me?

The provisions of this subpart apply to each new and existing facility that is a major source of HAP, as defined in § 63.2, at which web coating lines are operated.

§ 63.3300 Which of my emission sources are affected by this subpart?

The affected source subject to this subpart is the collection of all web coating lines at your facility. This includes web coating lines engaged in the coating of metal webs that are used in flexible packaging, and web coating lines engaged in the coating of fabric substrates for use in pressure sensitive tape and abrasive materials. Web coating lines specified in paragraphs (a) through (g) of this section are not part of the affected source of this subpart.

(a) Any web coating line that is stand-alone equipment under subpart KK of this part (National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Printing and Publishing Industry) which the owner or operator includes in the affected source under subpart KK.

(b) Any web coating line that is a product and packaging rotogravure or wide-web flexographic press under subpart KK of this part (NESHAP for the Printing and Publishing Industry) which is included in the affected source under subpart KK.

(c) Web coating in lithography, screenprinting, letterpress, and narrow-web flexographic printing processes.

(d) Any web coating line subject to subpart EE of this part (NESHAP for Magnetic Tape Manufacturing Operations).

(e) Any web coating line subject to subpart SSSS of this part (NESHAP for Surface Coating of Metal Coil).

(f) Any web coating line subject to subpart OOOO of this part (NESHAP for the Printing, Coating, and Dyeing of Fabrics and Other Textiles). This includes any web coating line that coats both a paper or other web substrate and a fabric or other textile substrate, except for a fabric substrate used for pressure sensitive tape and abrasive materials.

(g) Any web coating line that is defined as research or laboratory equipment in § 63.3310.

(h) Any web coating line that coats both paper or a web, and another substrate such as fabric, may comply with the subpart of this part that applies to the predominant activity conducted on the affected source. Predominant activity for this subpart is 90 percent of the mass of substrate coated during the compliance period. For example, a web coating line that coats 90 percent or more of a paper substrate, and 10 percent or less of a fabric or other textile substrate, would be subject to this subpart and not subpart OOOO of this part. You may use data for any reasonable time period of at least one year in determining the relative amount of coating activity, as long as they are expected to represent the way the source will continue to operate in the future. You must demonstrate and document the predominant activity annually.

(i) Any web coating line subject to this part that is modified to include printing activities, may continue to demonstrate compliance with this part, in lieu of demonstrating compliance with subpart KK of this part. Any web coating line with product and packaging rotogravure print station(s) and/or a wide-web flexographic print station(s) that is subject to this subpart may elect to continue demonstrating compliance with this subpart in lieu of subpart KK of this part, if the mass of the materials applied to the line's print station(s) in a month ever exceed 5 percent of the total mass of materials applied onto the line during the same period.

(j) If all of the subject web coating lines at your facility utilize non-HAP coatings, you can become exempt from the reporting requirements of this subpart, provided you submit a one-time report as required in § 63.3370(s) to your permitting authority documenting the use of only non-HAP coatings.

[67 FR 72341, Dec. 4, 2002, as amended at 71 FR 29805, May 24, 2006; 85 FR 41295, July 9, 2020]

§ 63.3310 What definitions are used in this subpart?

All terms used in this subpart that are not defined in this section have the meaning given to them in the Clean Air Act (CAA) and in subpart A of this part.

Always-controlled work station means a work station associated with a dryer from which the exhaust is delivered to a control device with no provision for the dryer exhaust to bypass the control device unless there is an interlock to interrupt and prevent continued coating during a bypass. Sampling lines for analyzers, relief valves needed for safety purposes, and periodic cycling of exhaust dampers to ensure safe operation are not considered bypass lines.

Applied means, for the purposes of this subpart, the amount of organic HAP, coating material, or coating solids (as appropriate for the emission standards in § 63.3320(b)) used by the affected source during the compliance period.

As-applied means the condition of a coating at the time of application to a substrate, including any added solvent.

As-purchased means the condition of a coating as delivered to the user.

Capture efficiency means the fraction of all organic HAP emissions generated by a process that is delivered to a control device, expressed as a percentage.

Capture system means a hood, enclosed room, or other means of collecting organic HAP emissions into a closed-vent system that exhausts to a control device.

Car-seal means a seal that is placed on a device that is used to change the position of a valve or damper (*e.g.,* from open to closed) in such a way that the position of the valve or damper cannot be changed without breaking the seal.

Coating material(s) means all liquid or semi-liquid materials (including the solids fraction of those materials as applied), such as inks, varnishes, adhesives (including hot melt adhesives or other hot melt materials), primers, solvents, reducers, and other materials applied to a substrate via a web coating line. Materials used to form a substrate or applied via vapor deposition, and dry abrasive materials deposited on top of a coated web, are not considered coating materials.

Control device means a device such as a solvent recovery device or oxidizer which reduces the organic HAP in an exhaust gas by recovery or by destruction.

Control device efficiency means the ratio of organic HAP emissions recovered or destroyed by a control device to the total organic HAP emissions that are introduced into the control device, expressed as a percentage.

Day means a 24-consecutive-hour period.

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 (including any 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 limitation (including any operating limit) or work practice standard in this subpart during start-up, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Existing affected source means any affected source the construction or reconstruction of which is commenced on or before September 13, 2000, and has not undergone reconstruction as defined in § 63.2.

Fabric means any woven, knitted, plaited, braided, felted, or non-woven material made of filaments, fibers, or yarns including thread. This term includes material made of fiberglass, natural fibers, synthetic fibers, or composite materials.

Facility means all contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

Flexible packaging means any package or part of a package the shape of which can be readily changed. Flexible packaging includes, but is not limited to, bags, pouches, labels, liners and wraps utilizing paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials.

Formulation data means data on the organic HAP mass fraction, volatile matter mass fraction, or coating solids mass fraction of a material that is generated by the manufacturer or means other than a test method specified in this subpart or an approved alternative method.

HAP means hazardous air pollutants.

HAP applied means the organic HAP content of all coating materials applied to a substrate by a web coating line at an affected source.

Intermittently-controlled work station means a work station associated with a dryer with provisions for the dryer exhaust to be delivered to or diverted from a control device through a bypass line, depending on the position of a valve or damper. Sampling lines for analyzers, relief valves needed for safety purposes, and periodic cycling of exhaust dampers to ensure safe operation are not considered bypass lines.

Metal coil means a continuous metal strip that is at least 0.15 millimeter (0.006 inch) thick which is packaged in a roll or coil prior to coating. After coating, it may or may not be rewound into a roll or coil. Metal coil does not include metal webs that are coated for use in flexible packaging.

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.

Never-controlled work station means a work station that is not equipped with provisions by which any emissions, including those in the exhaust from any associated dryer, may be delivered to a control device.

New affected source means any affected source the construction or reconstruction of which is commenced after September 13, 2000.

Overall organic HAP control efficiency means the total efficiency of a capture and control system.

Pressure sensitive tape means a flexible backing material with a pressure-sensitive adhesive coating on one or both sides of the backing. Examples include, but are not limited to, duct/duct insulation tape and medical tape.

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

Rewind or cutting station means a unit from which substrate is collected at the outlet of a web coating line.

Uncontrolled coating line means a coating line consisting of only never-controlled work stations.

Unwind or feed station means a unit from which substrate is fed to a web coating line.

Web means a continuous substrate (*e.g.,* paper, film, foil) which is flexible enough to be wound or unwound as rolls.

Web coating line means any number of work stations, of which one or more applies a continuous layer of liquid or semi-liquid coating material across the entire width or any portion of the width of a web substrate, and any associated curing/drying equipment between an unwind or feed station and a rewind or cutting station.

Work station means a unit on a web coating line where coating material is deposited onto a web substrate.

[67 FR 72341, Dec. 4, 2002, as amended at 85 FR 41296, July 9, 2020]

Emission Standards and Compliance Dates

§ 63.3320 What emission standards must I meet?

(a) If you own or operate any affected source that is subject to the requirements of this subpart, you must comply with these requirements on and after the compliance dates as specified in § 63.3330.

(b) You must limit organic HAP emissions to the level specified in paragraph (b)(1), (2), (3), or (4) of this section for all periods of operation, including startup, shutdown, and malfunction (SSM).

(1) No more than 5 percent of the organic HAP applied for each month (95 percent reduction) at existing affected sources, and no more than 2 percent of the organic HAP applied for each month (98 percent reduction) at new affected sources; or

(2) No more than 4 percent of the mass of coating materials applied for each month at existing affected sources, and no more than 1.6 percent of the mass of coating materials applied for each month at new affected sources; or

(3) No more than 20 percent of the mass of coating solids applied for each month at existing affected sources, and no more than 8 percent of the coating solids applied for each month at new affected sources.

(4) If you use an oxidizer to control organic HAP emissions, operate the oxidizer such that an outlet organic HAP concentration of no greater than 20 parts per million by volume (ppmv) on a dry basis is achieved and the efficiency of the capture system is 100 percent.

(c) You must demonstrate compliance with this subpart by following the procedures in § 63.3370.

[67 FR 72341, Dec. 4, 2002, as amended at 85 FR 41296, July 9, 2020]

§ 63.3321 What operating limits must I meet?

(a) For any web coating line or group of web coating lines for which you use add-on control devices to demonstrate compliance with the emission standards in § 63.3320, unless you use a solvent recovery system and conduct a liquid-liquid material balance, you must meet the operating limits specified in Table 1 to this subpart or according to paragraph (b) of this section. These operating limits apply to emission capture systems and control devices used to demonstrate compliance with this subpart, and you must establish the operating limits during the performance test according to the requirements in § 63.3360(e)(3). You must meet the operating limits at all times after you establish them.

(b) 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).

[67 FR 72341, Dec. 4, 2002, as amended at 85 FR 41296, July 9, 2020]

§ 63.3330 When must I comply?

(a) For affected sources which commenced construction or reconstruction prior to September 19, 2019, you must comply as follows:

(1) Before July 9, 2021, the affected coating operation(s) must be in compliance with the applicable emission limit in § 63.3320 at all times, except during periods of SSM. On and after July 9, 2021, the affected coating operation(s) must be in compliance with the applicable emission limit in § 63.3320 at all times, including periods of SSM.

(2) A periodic emissions performance test must be performed by July 9, 2023, or within 60 months of the previous test, whichever is later, and subsequent tests no later than 60 months thereafter, as required in § 63.3360. Performance testing for HAP or VOC destruction efficiency required by state agencies can be used to meet this requirement.

(3) After July 9, 2021, you must electronically submit initial notifications, notifications of compliance status, performance evaluation reports, and performance test reports, as required in § 63.3400. Semiannual compliance reports must be submitted electronically for the first full semiannual compliance period after the template has been available in the Compliance and Emissions Data Reporting Interface (CEDRI) for 1 year.

(b) For new affected sources which commenced construction or reconstruction after September 19, 2019, you must comply as indicated in paragraphs (b)(1) through (3) of this section. Existing affected sources which have undergone reconstruction as defined in § 63.2 are subject to the requirements for new affected sources. The costs associated with the purchase and installation of air pollution control equipment are not considered in determining whether the existing affected source has been reconstructed. Additionally, the costs of retrofitting and replacing of equipment that is installed specifically to comply with this subpart are not considered reconstruction costs.

(1) The coating operation(s) must be in compliance with the applicable emission limit in § 63.3320 at all times, including periods of SSM, starting July 9, 2020, or immediately upon startup, whichever is later.

(2) You must complete any initial performance test required in § 63.3360 within the time limits specified in § 63.7(a)(2), and subsequent tests no later than 60 months thereafter.

(3) You must electronically submit initial notifications, notifications of compliance status, performance evaluation reports, and performance test reports as required in § 63.3400 starting July 9, 2020, or immediately upon startup, whichever is later. Semiannual compliance reports must be submitted electronically for the first full semiannual compliance period after the template has been available in CEDRI for 1 year.

[85 FR 41296, July 9, 2020]

General Requirements for Compliance With the Emission Standards and for Monitoring and Performance Tests

§ 63.3340 What general requirements must I meet to comply with the standards?

(a) Before July 9, 2021, for each existing source for which construction or reconstruction commenced on or before September 19, 2019, you must be in compliance with the emission limits and operating limits in this subpart at all times, except during periods of SSM. On and after July 9, 2021, for each such source you must be in compliance with the emission limits and operating limits in this subpart at all times. For new and reconstructed sources for which construction or reconstruction commenced after September 19, 2019, you must be in compliance with the emission limits and operating limits in this subpart at all times, starting July 9, 2020, or immediately upon startup, whichever is later.

(b) For affected sources as of September 19, 2019, before July 9, 2021, 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). On and after July 9, 2021, for such sources and on July 9, 2020, or immediately upon startup, whichever is later, for new or reconstructed affected sources, you must always operate and maintain your 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 the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements 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.

(c) You must conduct each performance test required by § 63.3360 according to the requirements in § 63.3360(e)(2) 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, and nonoperation do not constitute representative conditions. You may not conduct performance tests during periods of malfunction. You must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(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. Representative conditions exclude periods of startup and shutdown. You may not conduct performance tests during periods of malfunction. 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.

(d) Table 2 to this subpart specifies the provisions of subpart A of this part that apply if you are subject to subpart JJJJ.

[85 FR 41296, July 9, 2020]

§ 63.3350 If I use a control device to comply with the emission standards, what monitoring must I do?

(a) A summary of monitoring you must do follows:

If you operate a web coating line, and have the following:	Then you must:
(1) Intermittently-controlled work stations	Record parameters related to possible exhaust flow bypass of control device and to coating use (§ 63.3350(c)).
(2) Solvent recovery unit	Operate continuous emission monitoring system and perform quarterly audits or determine volatile matter recovered and conduct a liquid-liquid material balance (§ 63.3350(d)).
(3) Control Device	Operate continuous parameter monitoring system (§ 63.3350(e)).
(4) Capture system	Monitor capture system operating parameter (§ 63.3350(f)).

(b) Following the date on which the initial or periodic performance test of a control device is completed to demonstrate continuing compliance with the standards, you must monitor and inspect each capture system and each control device used to comply with § 63.3320. You must install and operate the monitoring equipment as specified in paragraphs (c) and (f) of this section.

(c) ***Bypass and coating use monitoring.*** If you own or operate web coating lines with intermittently-controlled work stations, you must monitor bypasses of the control device and the mass of each coating material applied at the work station during any such bypass. If using a control device for complying with the requirements of this subpart, you must demonstrate that any coating material applied on a never-controlled work station or an intermittently-controlled work station operated in bypass mode is allowed in your compliance demonstration according to § 63.3370(o) and (p). The bypass monitoring must be conducted using at least one of the procedures in paragraphs (c)(1) through (4) of this section for each work station and associated dryer.

(1) ***Flow control position indicator.*** Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that provides a record indicating whether the exhaust stream from the dryer was directed to the control device or was diverted from the control device. The time and flow control position must be recorded at least once per hour as well as every time the flow direction is changed. A flow control position indicator must be installed at the entrance to any bypass line that could divert the exhaust stream away from the control device to the atmosphere.

(2) ***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. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve or damper is maintained in the closed position, and the exhaust stream is not diverted through the bypass line.

(3) ***Valve closure continuous monitoring.*** Ensure that any bypass line valve or damper is in the closed position through continuous monitoring of valve position when the emission source is in operation and is using a control device for compliance with the requirements of this subpart. The monitoring system must be inspected at least once every month to verify that the monitor will indicate valve position.

(4) ***Automatic shutdown system.*** Use an automatic shutdown system in which the web coating line is stopped when flow is diverted away from the control device to any bypass line when the control device is in operation. The automatic system must be inspected at least once every month to verify that it will detect diversions of flow and would shut down operations in the event of such a diversion.

(d) ***Solvent recovery unit.*** If you own or operate a solvent recovery unit to comply with § 63.3320, you must meet the requirements in either paragraph (d)(1) or (2) of this section depending on how control efficiency is determined.

(1) ***Continuous emission monitoring system (CEMS).*** If you are demonstrating compliance with the emission standards in § 63.3320 through continuous emission monitoring of a control device, you must install, calibrate, operate, and maintain the CEMS according to paragraphs (d)(1)(i) through (iii) of this section.

(i) Measure the total organic volatile matter mass flow rate at both the control device inlet and the outlet such that the reduction efficiency can be determined. Each continuous emission monitor must comply with performance specification 6, 8, or 9 of 40 CFR part 60, appendix B, as appropriate.

(ii) You must follow the quality assurance procedures in procedure 1, appendix F of 40 CFR part 60. In conducting the quarterly audits of the monitors as required by procedure 1, appendix F, you must use compounds representative of the gaseous emission stream being controlled.

(iii) You must have valid data from at least 90 percent of the hours when the process is operated. Invalid or missing data should be reported as a deviation in the semiannual compliance report.

(2) ***Liquid-liquid material balance.*** If you are demonstrating compliance with the emission standards in § 63.3320 through liquid-liquid material balance, you must install, calibrate, maintain, and operate according to the manufacturer's specifications a device that indicates the cumulative amount of volatile matter recovered by the solvent recovery device on a monthly basis. The device must be certified by the manufacturer to be accurate to within ±2.0 percent by mass.

(e) ***Continuous parameter monitoring system (CPMS).*** If you are using a control device to comply with the emission standards in § 63.3320, you must install, operate, and maintain each CPMS specified in paragraphs (e)(10) and (11) and (f) of this section according to the requirements in paragraphs (e)(1) through (9) of this section. You must install, operate, and maintain each CPMS specified in paragraph (c) of this section according to paragraphs (e)(5) through (8) of this section.

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

(2) You must have valid data from at least 90 percent of the hours when the process operated.

(3) You must determine the hourly average of all recorded readings according to paragraphs (e)(3)(i) and (ii) of this section.

(i) To calculate a valid hourly value, you must have at least three of four equally spaced data values from that hour from a continuous monitoring system (CMS) that is not out-of-control.

(ii) Provided all of the readings recorded in accordance with paragraph (e)(3) of this section clearly demonstrate continuous compliance with the standard that applies to you, then you are not required to determine the hourly average of all recorded readings.

(4) You must determine the block 3-hour average of all recorded readings for each operating period. To calculate the average for each 3-hour averaging period, you must have at least two of three of the hourly averages for that period using only average values that are based on valid data (*i.e.,* not from out-of-control periods).

(5) Except for temperature sensors, you must develop a quality control program that must contain, at a minimum, a written protocol that describes the procedures for each of the operations in § 63.3350(e)(5)(i) through (vi). The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, the owner or operator shall keep previous (*i.e.,* superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. For temperature sensors, you must follow the requirements in § 63.3350(e)(10).

(i) Initial and any subsequent calibration of the continuous monitoring system (CMS);

(ii) Determination and adjustment of the calibration drift of the CMS;

(iii) Preventative maintenance of the CMS, including spare parts inventory;

(iv) Data recording, calculations, and reporting;

(v) Accuracy audit procedures, including sampling and analysis methods; and

(vi) Program of corrective action for a malfunctioning CMS.

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

(7) At all times, you must maintain the monitoring system in proper working order including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(8) Except for monitoring malfunctions, associated repairs, or required quality assurance or control activities (including calibration checks or required zero and span adjustments), you must conduct all monitoring at all times that the unit is operating. Data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities shall not be used for purposes of calculating the emissions concentrations and percent reductions specified in § 63.3370. You must use all the valid data collected during all other periods in assessing compliance of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(9) Any averaging period for which you do not have valid monitoring data and such data are required constitutes a deviation, and you must notify the Administrator in accordance with § 63.3400(c).

(10) ***Oxidizer.*** If you are using an oxidizer to comply with the emission standards of this subpart, you must comply with paragraphs (e)(10)(i) through (vi) of this section.

(i) Install, maintain, and operate temperature monitoring equipment according to the manufacturer's specifications.

(ii) For an oxidizer other than a catalytic oxidizer, install, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature with an accuracy of ±1 percent of the temperature being monitored in degrees Fahrenheit or ±1.8 degrees Fahrenheit, whichever is greater. The temperature sensor must be installed in the combustion chamber at a location in the combustion zone.

(iii) For a catalytic oxidizer, install, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature with an accuracy of ±1 percent of the temperature being monitored in degrees Fahrenheit or ±1.8 degrees Fahrenheit, whichever is greater. The temperature sensor must be installed in the vent stream at the nearest feasible point to the inlet and outlet of the catalyst bed. Calculate the temperature rise across the catalyst.

(iv) For temperature sensors, you must develop a quality control program that must contain, at a minimum, a written protocol that describes the procedures for verifying that the temperature sensor is operating properly using at least one of the methods in paragraph (e)(10)(iv)(A), (B), (C), (D), (E), or (F) of this section. The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator:

(A) Semiannually, compare measured readings to a National Institute of Standards and Technology (NIST) traceable temperature measurement device or simulate a typical operating temperature using a NIST traceable temperature simulation device. When the temperature measurement device method is used, the sensor of the calibrated device must be placed as close as practicable to the process sensor, and both devices must be subjected to the same environmental conditions. The accuracy of the temperature measured must be 2.5 percent of the temperature measured by the NIST traceable device or 5 degrees Fahrenheit whichever is greater.

(B) Annually validate the temperature sensor by following applicable mechanical and electrical validation procedures in the manufacturer owner's manual.

(C) Annually request the temperature sensor manufacturer to certify or re-certify electromotive force (electrical properties) of the thermocouple.

(D) Annually replace the temperature sensor with a new certified temperature sensor in lieu of validation.

(E) Permanently install a redundant temperature sensor as close as practicable to the process temperature sensor. The sensors must yield a reading within 2.5 percent of each other for thermal oxidizers and catalytic oxidizers.

(F) Permanently install a temperature sensor with dual sensors to account for the possibility of failure.

(v) Conduct the validation checks in paragraph (e)(10)(iv)(A), (B), or (C) of this section any time the temperature sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor.

(vi) At least quarterly, inspect temperature sensor components for proper connection and integrity or continuously operate an electronic monitoring system designed to notify personnel if the signal from the temperature sensor is interrupted.

(11) ***Other types of control devices.*** If you use a control device other than an oxidizer or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of an alternative monitoring method under § 63.8(f).

(f) ***Capture system monitoring.*** If you are complying with the emission standards in § 63.3320 through the use of a capture system and control device for one or more web coating lines, you must develop a site-specific monitoring plan containing the information specified in paragraphs (f)(1) and (2) of this section for these capture systems. You must monitor the capture system in accordance with paragraph (f)(3) of this section. You must make the monitoring plan available for inspection by the permitting authority upon request.

(1) The monitoring plan must:

(i) Identify the operating parameter to be monitored to ensure that the capture efficiency determined during the initial compliance test is maintained; and

(ii) Explain why this parameter is appropriate for demonstrating ongoing compliance; and

(iii) Identify the specific monitoring procedures.

(2) The monitoring plan must specify the operating parameter value or range of values that demonstrate compliance with the emission standards in § 63.3320. The specified operating parameter value or range of values must represent the conditions present when the capture system is being properly operated and maintained.

(3) You must conduct all capture system monitoring in accordance with the plan.

(4) Any deviation from the operating parameter value or range of values which are monitored according to the plan will be considered a deviation from the operating limit.

(5) You must review and update the capture system monitoring plan at least annually.

[67 FR 72341, Dec. 4, 2002, as amended at 85 FR 41297, July 9, 2020]

§ 63.3360 What performance tests must I conduct?

(a) The performance test methods you must conduct are as follows:

If you control organic HAP on any individual web coating line or any group of web coating lines to demonstrate compliance with the emission limits in § 63.3320 by:	**You must:**
(1) Limiting organic HAP or volatile matter content of coatings	Determine the organic HAP or volatile matter and coating solids content of coating materials according to procedures in paragraphs (c) and (d) of this section. If applicable, determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to paragraph (g) of this section.
(2) Using a capture and control system	(i) Initially, conduct a performance test for each capture and control system to determine: The destruction or removal efficiency of each control device other than solvent recovery according to § 63.3360(e), and the capture efficiency of each capture system according to § 63.3360(f). If applicable, determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to § 63.3360(g).
	(ii) Perform a periodic test once every 5 years for each thermal oxidizer to determine the destruction or removal efficiency according to § 63.3360(e). If applicable, determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to § 63.3360(g).
	(iii) Either perform a periodic test once every 5 years for each catalytic oxidizer to determine the destruction or removal efficiency according to § 63.3360(e) OR perform a catalyst activity test annually on each catalytic oxidizer to ensure that the catalyst is performing properly according to § 63.3360(e)(3)(ii)(D)(1). If applicable, determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to § 63.3360(g).

(b) ***Control Device.*** If you are using a control device to comply with the emission standards in § 63.3320, you are not required to conduct a performance test to demonstrate compliance if one or more of the criteria in paragraphs (b)(1) through (3) of this section are met.

(1) The control device is equipped with continuous emission monitoring systems (CEMS) for determining inlet and outlet total organic volatile matter concentration and meeting the requirements of Performance Specification 6, 8, or 9 in appendix B to 40 CFR part 60 and capture efficiency has been determined in accordance with the requirements of this subpart such that an overall organic HAP control efficiency can be calculated, and the CEMS are used to demonstrate continuous compliance in accordance with § 63.3350; or

(2) You have met the requirements of § 63.7(h) (for waiver of performance testing); or

(3) The control device is a solvent recovery system and you comply by means of a monthly liquid-liquid material balance.

(c) ***Organic HAP content.*** If you determine compliance with the emission standards in § 63.3320 by means other than determining the overall organic HAP control efficiency of a control device, you must determine the organic HAP mass fraction of each coating material “as-purchased” by following one of the procedures in paragraphs (c)(1) through (3) of this section, and determine the organic HAP mass fraction of each coating material “as-applied” by following the procedures in paragraph (c)(4) of this section. If the organic HAP content values are not determined using the procedures in paragraphs (c)(1) through (3) of this section, the owner or operator must submit an alternative test method for determining their values for approval by the Administrator in accordance with § 63.7(f). The recovery efficiency of the test method must be determined for all of the target organic HAP and a correction factor, if necessary, must be determined and applied.

(1) ***Method 311.*** You may test the coating material in accordance with Method 311 of appendix A of this part. The Method 311 determination may be performed by the manufacturer of the coating material and the results provided to the owner or operator. The organic HAP content must be calculated according to the criteria and procedures in paragraphs (c)(1)(i) through (iii) of this section.

(i) Include each organic HAP determined to be present at greater than or equal to 0.1 mass percent for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in section A.6.4 of appendix A to 29 CFR 1910.1200 and greater than or equal to 1.0 mass percent for other organic HAP compounds.

(ii) Express the mass fraction of each organic HAP you include according to paragraph (c)(1)(i) of this section as a value truncated to four places after the decimal point (for example, 0.3791).

(iii) Calculate the total mass fraction of organic HAP in the tested material by summing the counted individual organic HAP mass fractions and truncating the result to three places after the decimal point (for example, 0.763).

(2) ***Method 24.*** For coatings, determine the volatile organic content as mass fraction of nonaqueous volatile matter and use it as a substitute for organic HAP using Method 24 of appendix A–7 to 40 CFR part 60. The Method 24 determination may be performed by the manufacturer of the coating and the results provided to you. One of the voluntary consensus standards in paragraphs (c)(2)(i) through (v) of this section may be used as an alternative to using Method 24.

(i) ASTM D1963–85 (Reapproved 1996), (incorporated by reference, see § 63.14);

(ii) ASTM D2111–10 (Reapproved 2015), (incorporated by reference, see § 63.14);

(iii) ASTM D2369–10 (Reapproved 2015)^{e}, (incorporated by reference, see § 63.14);

(iv) ASTM D2697–03 (Reapproved 2014), (incorporated by reference, see § 63.14); and

(v) ASTM D6093–97 (Reapproved 2016), (incorporated by reference, see § 63.14).

(3) ***Formulation data.*** You may use formulation data to determine the organic HAP mass fraction of a coating material. Formulation data may be provided to the owner or operator by the manufacturer of the material. In the event of an inconsistency between Method 311 (appendix A to this part) test data and a facility's formulation data, and the Method 311 test value is higher, the Method 311 data will govern. Formulation data may be used provided that the information represents all organic HAP present at a level equal to or greater than 0.1 percent for OSHA-defined carcinogens as specified in section A.6.4 of appendix A to 29 CFR 1910.1200 and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used.

(4) ***As-applied organic HAP mass fraction.*** If the as-purchased coating material is applied to the web without any solvent or other material added, then the as-applied organic HAP mass fraction is equal to the as-purchased organic HAP mass fraction. Otherwise, the as-applied organic HAP mass fraction must be calculated using Equation 4 of § 63.3370.

(d) ***Volatile organic and coating solids content.*** If you determine compliance with the emission standards in § 63.3320 by means other than determining the overall organic HAP control efficiency of a control device and you choose to use the volatile organic content as a surrogate for the organic HAP content of coatings, you must determine the as-purchased volatile organic content and coating solids content of each coating material applied by following the procedures in paragraph (d)(1) or (2) of this section, and the as-applied volatile organic content and coating solids content of each coating material by following the procedures in paragraph (d)(3) of this section.

(1) ***Method 24.*** You may determine the volatile organic and coating solids mass fraction of each coating applied using Method 24 (appendix A–7 to 40 CFR part 60). The Method 24 determination may be performed by the manufacturer of the material and the results provided to you. When using volatile organic compound content as a surrogate for HAP, you may also use ASTM D3960–98, (incorporated by reference, see § 63.14) as an alternative to Method 24. If these values cannot be determined using either of these methods, you must submit an alternative technique for determining their values for approval by the Administrator.

(2) ***Formulation data.*** You may determine the volatile organic content and coating solids content of a coating material based on formulation data and may rely on volatile organic content data provided by the manufacturer of the material. In the event of any inconsistency between the formulation data and the results of Method 24 of appendix A–7 to 40 CFR part 60 and the Method 24 results are higher, the results of Method 24 will govern.

(3) ***As-applied volatile organic content and coating solids content.*** If the as-purchased coating material is applied to the web without any solvent or other material added, then the as-applied volatile organic content is equal to the as-purchased volatile content and the as-applied coating solids content is equal to the as-purchased coating solids content. Otherwise, the as-applied volatile organic content must be calculated using Equation 5 to § 63.3370(c)(4) and the as-applied coating solids content must be calculated using Equation 6 to § 63.3370(d).

(e) ***Control device efficiency.*** If you are using an add-on control device other than solvent recovery, such as an oxidizer, to comply with the emission standards in § 63.3320, you must conduct a performance test to establish the destruction or removal efficiency of the control device according to the methods and procedures in paragraphs (e)(1) and (2) of this section. During the performance test, you must establish the operating limits required by § 63.3321 according to paragraph (e)(3) of this section.

(1) ***Initial performance test.*** An initial performance test to establish the destruction or removal efficiency of the control device used to comply with the emission standards in § 63.3320 must be conducted such that control device inlet and outlet testing is conducted simultaneously, and the data are reduced in accordance with the test methods and procedures in paragraphs (e)(1)(i) through (ix) of this section. You must conduct three test runs as specified in § 63.7(e)(3), and each test run must last at least 1 hour.

(i) Method 1 or 1A of appendix A–1 to 40 CFR part 60 must be used for sample and velocity traverses to determine sampling locations.

(ii) Method 2, 2A, 2C, 2D, or 2F of appendix A–1 to 40 CFR part 60, or Method 2G of appendix A–2 to 40 CFR part 60 must be used to determine gas volumetric flow rate.

(iii) Method 3, 3A, or 3B of appendix A–2 to 40 CFR part 60 must be used for gas analysis to determine dry molecular weight. You may also use as an alternative to Method 3B the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas in ANSI/ASME PTC 19.10–1981 Part 10, (incorporated by reference, see § 63.14).

(iv) Method 4 of appendix A–3 to 40 CFR part 60 must be used to determine stack gas moisture.

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

(vi) Method 25 or 25A of appendix A–7 to 40 CFR part 60 must be used to determine total gaseous organic matter concentration. Use the same test method for both the inlet and outlet measurements which must be conducted simultaneously. You must submit notice of the intended test method to the Administrator for approval along with notification of the performance test required under § 63.7(b). You must use method 25A if any of the conditions described in paragraphs (e)(1)(vi)(A) through (D) of this section apply to the control device.

(A) The control device is not an oxidizer.

(B) The control device is an oxidizer but an exhaust gas volatile organic matter concentration of 50 ppmv or less is required to comply with the emission standards in § 63.3320; or

(C) The control device is an oxidizer but the volatile organic matter concentration at the inlet to the control system and the required level of control are such that they result in exhaust gas volatile organic matter concentrations of 50 ppmv or less; or

(D) The control device is an oxidizer but because of the high efficiency of the control device the anticipated volatile organic matter concentration at the control device exhaust is 50 ppmv or less, regardless of inlet concentration.

(vii) Except as provided in § 63.7(e)(3), each performance test must consist of three separate runs with each run conducted for at least 1 hour under the conditions that exist when the affected source is operating under normal operating conditions. For the purpose of determining volatile organic compound concentrations and mass flow rates, the average of the results of all the runs will apply.

(viii) Volatile organic matter mass flow rates must be determined for each run specified in paragraph (e)(1)(vii) of this section using Equation 1:

$$M_f = Q_{sd} C_c [12][0.0416][10^{-6}] \qquad \text{Equation 1}$$

Where:

M_f = Total organic volatile matter mass flow rate, kilograms (kg)/hour (h).

Q_{sd} = Volumetric flow rate of gases entering or exiting the control device, as determined according to paragraph (e)(1)(ii) of this section, dry standard cubic meters (dscm)/h.

C_c = Concentration of organic compounds as carbon, ppmv.

12.0 = Molecular weight of carbon.

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

(ix) For each run, emission control device destruction or removal efficiency must be determined using Equation 2:

$$E = \frac{M_{fi} - M_{fo}}{M_{fi}} \times 100 \qquad \text{Equation 2}$$

Where:

E = Organic volatile matter control efficiency of the control device, percent.

M_{fi} = Organic volatile matter mass flow rate at the inlet to the control device, kg/h.

M_{fo} = Organic volatile matter mass flow rate at the outlet of the control device, kg/h.

(x) The control device destruction or removal efficiency is determined as the average of the efficiencies determined in the test runs and calculated in Equation 2.

(2) ***Process information.*** You must record such process information as may be necessary to determine the conditions in existence at the time of the performance test. Representative conditions exclude periods of startup and shutdown. You may not conduct performance tests during periods of malfunction. You must record the process information that is necessary to document operating conditions during the test and include in such

record an explanation to support that such conditions represent normal operation. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(3) ***Operating limits.*** If you are using one or more add-on control device other than a solvent recovery system for which you conduct a liquid-liquid material balance to comply with the emission standards in § 63.3320, you must establish the applicable operating limits required by § 63.3321. These operating limits apply to each add-on emission control device, and you must establish the operating limits during the performance test required by paragraph (e) of this section according to the requirements in paragraphs (e)(3)(i) and (ii) of this section.

(i) Thermal oxidizer. If your add-on control device is a thermal oxidizer, establish the operating limits according to paragraphs (e)(3)(i)(A) and (B) of this section.

(A) 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.

(B) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. Maintain the 3-hour average combustion temperature no more than 50 degrees Fahrenheit lower than this average combustion temperature.

(ii) Catalytic oxidizer. If your add-on control device is a catalytic oxidizer, establish the operating limits according to paragraphs (e)(3)(ii)(A) and (B) or paragraphs (e)(3)(ii)(C) and (D) of this section.

(A) 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.

(B) 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. Maintain the 3-hour average combustion temperature no more than 50 degrees Fahrenheit lower than this average combustion temperature or maintain the 3-hour average temperature difference across the catalyst bed at no less than 80 percent of this average temperature differential, provided that the minimum temperature is always 50 degrees Fahrenheit above the catalyst's ignition temperature.

(C) As an alternative to monitoring the temperature difference across the catalyst bed, you may 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 (e)(3)(ii)(D) 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. Maintain the 3-hour average combustion temperature no more than 50 degrees Fahrenheit lower than this average combustion temperature.

(D) You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s) for which you elect to monitor according to paragraph (e)(3)(ii)(C) of this section. The plan must address, at a minimum, the elements specified in paragraphs (e)(3)(ii)(D)(1) through (3) of this section.

(*1*) Annual sampling and analysis of the catalyst activity (*i.e.,* conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures,

(*2*) Monthly inspection of the oxidizer system including the burner assembly and fuel supply lines for problems, and

(*3*) Annual internal and monthly external visual inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, you must take corrective action consistent with the manufacturer's recommendations and conduct a new performance test to determine destruction efficiency in accordance with this section.

(4) ***Control Destruction Efficiency Curve Development.*** If you are using one or more add-on control devices other than a solvent recovery system for which you conduct a liquid-liquid material balance to comply with the emission standards in § 63.3320, you may establish a control destruction efficiency curve for use in estimating emissions that occur during deviations of the 3-hour operating parameters. This curve can be generated using test data or manufacturer's data that specifically documents the level of control at varying temperatures for your control device.

(f) ***Capture efficiency.*** If you demonstrate compliance by meeting the requirements of § 63.3370(f), (g), (h), (i), (j)(2), (l), (o)(2) or (3), or (q), you must determine capture efficiency using the procedures in paragraph (f)(1), (2), or (3) of this section, as applicable.

(1) You may assume your capture efficiency equals 100 percent if your capture system is a permanent total enclosure (PTE). You must confirm that your capture system is a PTE by demonstrating that it meets the requirements of section 6 of EPA Method 204 of 40 CFR part 51, appendix M, and that all exhaust gases from the enclosure are delivered to a control device.

(2) You may determine capture efficiency according to the protocols for testing with temporary total enclosures that are specified in Methods 204 and 204A through F of 40 CFR part 51, appendix M. You may exclude never-controlled work stations from such capture efficiency determinations.

(3) You may use any capture efficiency protocol and test methods that satisfy the criteria of either the Data Quality Objective or the Lower Confidence Limit approach as described in appendix A of subpart KK of this part. You may exclude never-controlled work stations from such capture efficiency determinations.

(g) ***Volatile matter retained in the coated web or otherwise not emitted to the atmosphere.*** You may choose to take into account the mass of volatile matter retained in the coated web after curing or drying or otherwise not emitted to the atmosphere when determining compliance with the emission standards in § 63.3320. If you choose this option, you must develop a site- and product-specific emission factor (EF) and determine the amount of volatile matter retained in the coated web or otherwise not emitted using Equation 3 to § 63.3360(g)(1). The EF must be developed by conducting a performance test using an approved EPA test method, or alternative approved by the Administrator by obtaining the average of a three-run test. You may additionally use manufacturer's emissions test data (as long as it replicates the facility's coating formulation and operating conditions), or a mass-balance type approach using a modified Method 24 (including ASTM D5403–93 for radiation-cureable coatings). The EF should equal the proportion of the mass of volatile organics emitted to the mass of volatile organics in the coating materials evaluated. You may use the EF in your compliance calculations only for periods that the work station(s) was (were) used to make the product, or a similar product, corresponding to that produced during the performance test. You must develop a separate EF for each group of different products that you choose to utilize an EF for calculating emissions by conducting a separate performance test for that group of products. You must conduct a periodic performance test to re-establish the EF if there is a change in coating formulation, operating conditions, or other change that could reasonably be expected to increase emissions since the time of the last test that was used to establish the EF.

(1) Calculate the mass of volatile organics retained in the coated web or otherwise not emitted for the month from each group of similar products using Equation 3:

$$M_{vret} = \left(C_{vi}M_i + \sum_{j=1}^{q} C_{vij}M_{ij}\right) \times (1 - EF_i) \qquad \text{Equation 3}$$

Where:

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg.

C_{vi} = Volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{vij} = Volatile organic content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

EF_i = Volatile organic matter site- and product-specific emission factor (three-run average determined from performance testing, evaluated as proportion of mass volatile organics emitted to mass of volatile organics in the coatings used during the performance test).

(2) [Reserved]

(h) ***Control devices in series.*** If you use multiple control devices in series to comply with the emission standards in § 63.3320, the performance test must include, at a minimum, the inlet to the first control device in the series, the outlet of the last control device in the series, and all intermediate streams (*e.g.,* gaseous exhaust to the atmosphere or a liquid stream from a recovery device) that are not subsequently treated by any of the control devices in the series.

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Requirements for Showing Compliance

§ 63.3370 How do I demonstrate compliance with the emission standards?

You must demonstrate compliance each month with the emission limitations in § 63.3320(b)(1) through (4). For each monthly demonstration, you may apply any combination of the emission limitations to each of your web coating lines individually, to each of one or more groupings of your lines (including a single grouping encompassing all lines of your affected source), or to any combination of individual and grouped lines, so long as each web coating line is included in the compliance demonstration for the month (*i.e.,* you are not required to apply the same emission limitation to each of the individual lines or groups of lines). You may change the emission limitation that you apply each month to your individual or grouped lines, and you may change line groupings for your monthly compliance demonstration.

(a) A summary of how you must demonstrate compliance follows:

If you choose to demonstrate compliance by:	**Then you must demonstrate that:**	**To accomplish this:**
(1) Use of “as-purchased” compliant coating materials	(i) Each coating material used at an existing affected source does not exceed 0.04 kg organic HAP per kg coating material, and each coating material used at a new affected source does not exceed 0.016 kg organic HAP per kg coating material as-purchased; or	Follow the procedures set out in § 63.3370(b).
	(ii) Each coating material used at an existing affected source does not exceed 0.2 kg organic HAP per kg coating solids, and each coating material used at a new affected source does not exceed 0.08 kg organic HAP per kg coating solids as-purchased	Follow the procedures set out in § 63.3370(b).

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
(2) Use of "as-applied" compliant coating materials	(i) Each coating material used at an existing affected source does not exceed 0.04 kg organic HAP per kg coating material, and each coating material used at a new affected source does not exceed 0.016 kg organic HAP per kg coating material as-applied; or	Follow the procedures set out in § 63.3370(c)(1). Use either Equation 4 or 5 of § 63.3370 to determine compliance with § 63.3320(b)(2) in accordance with § 63.3370(c)(5)(i).
	(ii) Each coating material used at an existing affected source does not exceed 0.2 kg organic HAP per kg coating solids, and each coating material used at a new affected source does not exceed 0.08 kg organic HAP per kg coating solids as-applied; or	Follow the procedures set out in § 63.3370(c)(2). Use Equations 6 and 7 of § 63.3370 to determine compliance with § 63.3320(b)(3) in accordance with § 63.3370(c)(5)(i).
	(iii) Monthly average of all coating materials used at an existing affected source does not exceed 0.04 kg organic HAP per kg coating material, and monthly average of all coating materials used at a new affected source does not exceed 0.016 kg organic HAP per kg coating material as-applied on a monthly average basis; or	Follow the procedures set out in § 63.3370(c)(3). Use Equation 8 of § 63.3370 to determine compliance with § 63.3320(b)(2) in accordance with § 63.3370(c)(5)(ii).
	(iv) Monthly average of all coating materials used at an existing affected source does not exceed 0.2 kg organic HAP per kg coating solids, and monthly average of all coating materials used at a new affected source does not exceed 0.08 kg organic HAP per kg coating solids as-applied on a monthly average basis	Follow the procedures set out in § 63.3370(c)(4). Use Equation 9 of § 63.3370 to determine compliance with § 63.3320(b)(3) in accordance with § 63.3370(c)(5)(ii).
(3) Tracking total monthly organic HAP applied	Total monthly organic HAP applied does not exceed the calculated limit based on emission limitations	Follow the procedures set out in § 63.3370(d). Show that total monthly HAP applied (Equation 10 of § 63.3370) is less than the calculated equivalent allowable organic HAP (Equation 17 or 18 of § 63.3370).
(4) Accounting for volatile matter retained in the coated web or otherwise not emitted	A site- and product-specific emission factor was appropriately established for the group of products for which the site- and product-specific emission factor was used in the compliance calculations	Follow the procedures set out in § 63.3360(g) and § 63.3370(e)
(5) Use of a capture system and control device	(i) Overall organic HAP control efficiency is equal to 95 percent at an existing affected source and 98 percent at a new affected source on a monthly basis; or oxidizer outlet organic HAP concentration is no greater than 20 ppmv and capture efficiency is 100 percent; or operating parameters are continuously monitored; or	Follow the procedures set out in § 63.3370(f) to determine compliance with § 63.3320(b)(1) according to § 63.3370(j) if using a solvent recovery device, or § 63.3370(k) if using a control device and CPMS, or § 63.3370(l) if using an oxidizer.

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
	(ii) Overall organic HAP emission rate does not exceed 0.2 kg organic HAP per kg coating solids for an existing affected source or 0.08 kg organic HAP per kg coating solids for a new affected source on a monthly average as-applied basis;	Follow the procedures set out in § 63.3370(g) to determine compliance with § 63.3320(b)(3) according to § 63.3370(j) if using a solvent recovery device, or § 63.3370(l) if using an oxidizer.
	(iii) Overall organic HAP emission rate does not exceed 0.04 kg organic HAP per kg coating material for an existing affected source or 0.016 kg organic HAP per kg coating material for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in § 63.3370(h) to determine compliance with § 63.3320(b)(2) according to § 63.3370(j) if using a solvent recovery device, or § 63.3370(l) if using an oxidizer.
	(iv) Overall organic HAP emission rate does not exceed the calculated limit based on emission limitations	Follow the procedures set out in § 63.3370(i). Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 17 or 18 of § 63.3370). Calculate the monthly organic HAP emission rate according to § 63.3370(j) if using a solvent recovery device, or § 63.3370(l) if using an oxidizer.
(6) Use of multiple capture and/or control devices	(i) Overall organic HAP control efficiency is equal to 95 percent at an existing affected source and 98 percent at a new affected source on a monthly basis; or	Follow the procedures set out in § 63.3370(f) to determine compliance with § 63.3320(b)(1) according to § 63.3370(f)(1) or (2).
	(ii) Average equivalent organic HAP emission rate does not exceed 0.2 kg organic HAP per kg coating solids for an existing affected source or 0.08 kg organic HAP per kg coating solids for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in § 63.3370(g) to determine compliance with § 63.3320(b)(3) according to § 63.3370(o).
	(iii) Average equivalent organic HAP emission rate does not exceed 0.04 kg organic HAP per kg coating material for an existing affected source or 0.016 kg organic HAP per kg coating material for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in § 63.3370(h) to determine compliance with § 63.3320(b)(2) according to § 63.3370(o).
	(iv) Average equivalent organic HAP emission rate does not exceed the calculated limit based on emission limitations	Follow the procedures set out in § 63.3370(i). Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 17 or 18 of § 63.3370) according to § 63.3370(o).
(7) Use of a combination of compliant coatings and control devices	(i) Average equivalent organic HAP emission rate does not exceed 0.2 kg organic HAP per kg coating solids for an existing affected source or 0.08 kg organic HAP per kg coating solids for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in § 63.3370(g) to determine compliance with § 63.3320(b)(3) according to § 63.3370(o).

If you choose to demonstrate compliance by:	**Then you must demonstrate that:**	**To accomplish this:**
	(ii) Average equivalent organic HAP emission rate does not exceed 0.04 kg organic HAP per kg coating material for an existing affected source or 0.016 kg organic HAP per kg coating material for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in § 63.3370(h) to determine compliance with § 63.3320(b)(2) according to § 63.3370(o).
	(iii) Average equivalent organic HAP emission rate does not exceed the calculated limit based on emission limitations	Follow the procedures set out in § 63.3370(i). Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 17 or 18 of § 63.3370) according to § 63.3370(o).
(8) Use of non-HAP coatings	All coatings for all coating lines at an affected source have organic HAP contents below 0.1 percent by mass for OSHA-defined carcinogens as specified in section A.6.4 of appendix A to 29 CFR 1910.1200, and below 1.0 percent by mass for other organic HAP compounds	Follow the procedures set out in § 63.3370(s).

(b) ***As-purchased "compliant" coating materials.***

(1) If you comply by using coating materials that individually meet the emission standards in § 63.3320(b)(2) or (3), you must demonstrate that each coating material applied during the month at an existing affected source contains no more than 0.04 mass fraction organic HAP or 0.2 kg organic HAP per kg coating solids, and that each coating material applied during the month at a new affected source contains no more than 0.016 mass fraction organic HAP or 0.08 kg organic HAP per kg coating solids on an as-purchased basis as determined in accordance with § 63.3360(c).

(2) You are in compliance with emission standards in § 63.3320(b)(2) and (3) if each coating material applied at an existing affected source is applied as-purchased and contains no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and each coating material applied at a new affected source is applied as-purchased and contains no more than 0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids.

(c) ***As-applied "compliant" coating materials.*** If you comply by using coating materials that meet the emission standards in § 63.3320(b)(2) or (3) as-applied, you must demonstrate compliance by following one of the procedures in paragraphs (c)(1) through (4) of this section. Compliance is determined in accordance with paragraph (c)(5) of this section.

(1) ***Each coating material as-applied meets the mass fraction of coating material standard (§ 63.3320(b)(2)).*** You must demonstrate that each coating material applied at an existing affected source during the month contains no more than 0.04 kg organic HAP per kg coating material applied, and each coating material applied at a new affected source contains no more than 0.016 kg organic HAP per kg coating material applied as determined in accordance with paragraphs (c)(1)(i) and (ii) of this section. You must calculate the as-applied organic HAP content of as-purchased coating materials which are reduced, thinned, or diluted prior to application.

(i) Determine the organic HAP content or volatile organic content of each coating material applied on an as-purchased basis in accordance with § 63.3360(c).

(ii) Calculate the as-applied organic HAP content of each coating material using Equation 4:

$$C_{ahi} = \frac{\left(C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Equation 4}$$

Where:

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg. or calculate the as-applied volatile organic content of each coating material using Equation 5:

$$C_{avi} = \frac{\left(C_{vi}M_i + \sum_{j=1}^{q} C_{vij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Equation 5}$$

Where:

C_{avi} = Monthly average, as-applied, volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

C_{vi} = Volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{vij} = Volatile organic content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(2) ***Each coating material as-applied meets the mass fraction of coating solids standard (§ 63.3320(b)(3)).*** You must demonstrate that each coating material applied at an existing affected source contains no more than 0.20 kg of organic HAP per kg of coating solids applied and each coating material applied at a new affected source contains no more than 0.08 kg of organic HAP per kg of coating solids applied. You must demonstrate compliance in accordance with paragraphs (c)(2)(i) and (ii) of this section.

(i) Determine the as-applied coating solids content of each coating material following the procedure in § 63.3360(d). You must calculate the as-applied coating solids content of coating materials which are reduced, thinned, or diluted prior to application, using Equation 6:

$$C_{asi} = \frac{\left(C_{si} M_i + \sum_{j=1}^{q} C_{sij} M_{ij} \right)}{M_i + \sum_{j=1}^{q} M_{ij}}$$

Equation 6

Where:

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{sij} = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass-fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(ii) Calculate the as-applied organic HAP to coating solids ratio using Equation 7:

$$H_{si} = \frac{C_{ahi}}{C_{asi}}$$

Equation 7

Where:

H_{si} = As-applied, organic HAP to coating solids ratio of coating material, i.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

C_{asi} = Monthly average, as-applied, coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

(3) ***Monthly average organic HAP content of all coating materials as-applied is less than the mass percent limit (§ 63.3320(b)(2)).*** Demonstrate that the monthly average as-applied organic HAP content of all coating materials applied at an existing affected source is less than 0.04 kg organic HAP per kg of coating material applied, and all coating materials applied at a new affected source are less than 0.016 kg organic HAP per kg of coating material applied, as determined by Equation 8:

$$H_L = \frac{\sum_{i=1}^{p} C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij} - M_{vret}}{\sum_{i=1}^{p} M_i + \sum_{j=1}^{q} M_{ij}}$$

Equation 8

Where:

H_L = Monthly average, as-applied, organic HAP content of all coating materials applied, expressed as kg organic HAP per kg of coating material applied, kg/kg.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in § 63.3370.

(4) ***Monthly average organic HAP content of all coating materials as-applied is less than the mass fraction of coating solids limit (§ 63.3320(b)(3)).*** Demonstrate that the monthly average as-applied organic HAP content on the basis of coating solids applied of all coating materials applied at an existing affected source is less than 0.20 kg organic HAP per kg coating solids applied, and all coating materials applied at a new affected source are less than 0.08 kg organic HAP per kg coating solids applied, as determined by Equation 9:

$$H_S = \frac{\sum_{i=1}^{p} C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij} - M_{vret}}{\sum_{i=1}^{p} C_{Si}M_i + \sum_{j=1}^{q} C_{Sij}M_{ij}}$$

Equation 9

Where:

H_s = Monthly average, as-applied, organic HAP to coating solids ratio, kg organic HAP/kg coating solids applied.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in § 63.3370.

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

C_{sij} = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass-fraction, kg/kg.

(5) The affected source is in compliance with emission standards in § 63.3320(b)(2) or (3) if:

(i) The organic HAP content of each coating material as-applied at an existing affected source is no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and the organic HAP content of each coating material as-applied at a new affected source contains no more than 0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids; or

(ii) The monthly average organic HAP content of all as-applied coating materials at an existing affected source are no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and the monthly average organic HAP content of all as-applied coating materials at a new affected source is no more than 0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids.

(d) ***Monthly allowable organic HAP applied.*** Demonstrate that the total monthly organic HAP applied as determined by Equation 10 is less than the calculated equivalent allowable organic HAP as determined by Equation 17 or 18 in paragraph (m) of this section:

$$H_m = \sum_{i=1}^{p} C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij} - M_{vret}$$

Equation 10

Where:

H_m = Total monthly organic HAP applied, kg.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in § 63.3370.

(e) ***Accounting for volatile matter retained in the coated web or otherwise not emitted.*** If you choose to use the equation in § 63.3360(g) to take into account volatile organic matter that is retained in the coated web or otherwise not emitted, you must identify each group of similar products that can utilize each site- and product-specific emission factor. Details regarding the test methods and calculations are provided in § 63.3360(g).

(f) ***Capture and control to reduce emissions to no more than allowable limit (§ 63.3320(b)(1)).*** Operate a capture system and control device and demonstrate an overall organic HAP control efficiency of at least 95 percent at an existing affected source and at least 98 percent at a new affected source for each month, or operate a capture system and oxidizer so that an outlet organic HAP concentration of no greater than 20 ppmv on a dry basis is achieved as long as the capture efficiency is 100 percent as detailed in § 63.3320(b)(4). Unless one of the cases described in paragraph (f)(1), (2), or (3) of this section applies to the affected source, you must either demonstrate compliance in accordance with the procedure in paragraph (i) of this section when emissions from the affected source are controlled by a solvent recovery device, or the procedure in paragraph (l) of this section when emissions are controlled by an oxidizer or demonstrate compliance for a web coating line by operating each capture system and each control device and continuous parameter monitoring according to the procedures in paragraph (k) of this section.

(1) If the affected source has only always-controlled work stations and operates more than one capture system or more than one control device, you must demonstrate compliance in accordance with the provisions of either paragraph (o) or (q) of this section.

(2) If the affected source operates one or more never-controlled work stations or one or more intermittently-controlled work stations, you must demonstrate compliance in accordance with the provisions of paragraph (o) of this section.

(3) An alternative method of demonstrating compliance with § 63.3320(b)(1) is the installation of a PTE around the web coating line that achieves 100 percent capture efficiency and ventilation of all organic HAP emissions from the total enclosure to an oxidizer with an outlet organic HAP concentration of no greater than 20 ppmv on a dry basis. If this method is selected, you must demonstrate compliance by following the procedures in paragraphs (f)(3)(i) and (ii) of this section. Compliance is determined according to paragraph (f)(3)(iii) of this section.

(i) Demonstrate that a total enclosure is installed. An enclosure that meets the requirements in § 63.3360(f)(1) will be considered a total enclosure.

(ii) Determine the organic HAP concentration at the outlet of your total enclosure using the procedures in paragraph (f)(3)(ii)(A) or (B) of this section.

(A) Determine the control device efficiency using Equation 2 of § 63.3360 and the applicable test methods and procedures specified in § 63.3360(e).

(B) Use a CEMS to determine the organic HAP emission rate according to paragraphs (j)(2)(i) through (x) of this section.

(iii) You are in compliance if the installation of a total enclosure is demonstrated and the organic HAP concentration at the outlet of the incinerator is demonstrated to be no greater than 20 ppmv on a dry basis.

(g) ***Capture and control to achieve mass fraction of coating solids applied limit (§ 63.3320(b)(3)).*** Operate a capture system and control device and limit the organic HAP emission rate from an existing affected source to no more than 0.20 kg organic HAP emitted per kg coating solids applied, and from a new affected source to no more than 0.08 kg organic HAP emitted per kg coating solids applied as determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then you must demonstrate compliance in accordance with the provisions of paragraph (o) of this section. Otherwise, you must demonstrate compliance following the procedure in paragraph (j) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (l) of this section when emissions are controlled by an oxidizer.

(h) ***Capture and control to achieve mass fraction limit (§ 63.3320(b)(2)).*** Operate a capture system and control device and limit the organic HAP emission rate to no more than 0.04 kg organic HAP emitted per kg coating material applied at an existing affected source, and no more than 0.016 kg organic HAP emitted per kg coating material applied at a new affected source as determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then you must demonstrate compliance in accordance with the provisions of paragraph (o) of this section. Otherwise, you must demonstrate compliance following the procedure in paragraph (j) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (l) of this section when emissions are controlled by an oxidizer.

(i) ***Capture and control to achieve allowable emission rate.*** Operate a capture system and control device and limit the monthly organic HAP emissions to less than the allowable emissions as calculated in accordance with paragraph (m) of this section. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then you must demonstrate compliance in accordance with the provisions of paragraph (o) of this section. Otherwise, the owner or operator must demonstrate compliance following the procedure in paragraph (j) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (l) of this section when emissions are controlled by an oxidizer.

(j) ***Solvent recovery device compliance demonstration.*** If you use a solvent recovery device to control emissions, you must show compliance by following the procedures in either paragraph (j)(1) or (2) of this section:

(1) ***Liquid-liquid material balance.*** Perform a monthly liquid-liquid material balance as specified in paragraphs (j)(1)(i) through (v) of this section and use the applicable equations in paragraphs (j)(1)(vi) through (ix) of this section to convert the data to units of the selected compliance option in paragraphs (f) through (i) of this section. Compliance is determined in accordance with paragraph (j)(1)(x) of this section.

(i) Determine the mass of each coating material applied on the web coating line or group of web coating lines controlled by a common solvent recovery device during the month.

(ii) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in § 63.3360(c).

(iii) Determine the volatile organic content of each coating material as-applied during the month following the procedure in § 63.3360(d).

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material applied during the month following the procedure in § 63.3360(d).

(v) Determine and monitor the amount of volatile organic matter recovered for the month according to the procedures in § 63.3350(d).

(vi) ***Recovery efficiency.*** Calculate the volatile organic matter collection and recovery efficiency using Equation 11:

$$R_v = \frac{M_{vr} + M_{vret}}{\sum_{i=1}^{p} C_{vi} M_i + \sum_{i=1}^{q} C_{vij} M_{ij}} \times 100 \qquad \text{Equation 11}$$

Where:

R_v = Organic volatile matter collection and recovery efficiency, percent.

M_{vr} = Mass of volatile matter recovered in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

p = Number of different coating materials applied in a month.

C_{vi} = Volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{vij} = Volatile organic content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(vii) ***Organic HAP emitted.*** Calculate the organic HAP emitted during the month using Equation 12:

$$H_e = \left[1 - \frac{R_v}{100}\right]\left[\sum_{i=1}^{p} C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij} - M_{vret}\right] \qquad \text{Equation 12}$$

Where:

H_e = Total monthly organic HAP emitted, kg.

R_v = Organic volatile matter collection and recovery efficiency, percent.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(viii) ***Organic HAP emission rate based on coating solids applied.*** Calculate the organic HAP emission rate based on coating solids applied using Equation 13:

$$L = \frac{H_e}{\sum_{i=1}^{p} C_{si} M_i + \sum_{j=1}^{q} C_{sij} M_{ij}}$$

Equation 13

Where:

L = Mass organic HAP emitted per mass of coating solids applied, kg/kg.

H_e = Total monthly organic HAP emitted, kg.

p = Number of different coating materials applied in a month.

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{sij} = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass-fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(ix) ***Organic HAP emission rate based on coating materials applied.*** Calculate the organic HAP emission rate based on coating material applied using Equation 14:

$$S = \frac{H_e}{\sum_{i=1}^{p} M_i + \sum_{j=1}^{q} M_{ij}}$$

Equation 14

Where:

S = Mass organic HAP emitted per mass of material applied, kg/kg.

H_e = Total monthly organic HAP emitted, kg.

p = Number of different coating materials applied in a month.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(x) You are in compliance with the emission standards in § 63.3320(b) if:

(A) The volatile organic matter collection and recovery efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(B) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(C) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(D) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (m) of this section.

(2) ***Continuous emission monitoring of capture system and control device performance.*** Demonstrate initial compliance through a performance test on capture efficiency and continuing compliance through continuous emission monitors and continuous monitoring of capture system operating parameters following the procedures in paragraphs (j)(2)(i) through (vii) of this section. Use the applicable equations specified in paragraphs (j)(2)(viii) through (x) of this section to convert the monitoring and other data into units of the selected compliance option in paragraphs (f) through (i) of this section. Compliance is determined in accordance with paragraph (j)(2)(xi) of this section.

(i) ***Control device efficiency.*** Continuously monitor the gas stream entering and exiting the control device to determine the total organic volatile matter mass flow rate (*e.g.,* by determining the concentration of the vent gas in grams per cubic meter and the volumetric flow rate in cubic meters per second such that the total organic volatile matter mass flow rate in grams per second can be calculated) such that the control device efficiency of the control device can be calculated for each month using Equation 2 of § 63.3360.

(ii) ***Capture efficiency monitoring.*** Whenever a web coating line is operated, continuously monitor the operating parameters established in accordance with § 63.3350(f) to ensure capture efficiency.

(iii) Determine the percent capture efficiency in accordance with § 63.3360(f).

(iv) ***Control efficiency.*** Calculate the overall organic HAP control efficiency achieved for each month using Equation 15:

$$R = \frac{(E)(CE)}{100} \qquad \text{Equation 15}$$

Where:

R = Overall organic HAP control efficiency, percent.

E = Organic volatile matter control efficiency of the control device, percent.

CE = Organic volatile matter capture efficiency of the capture system, percent.

(v) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating materials applied, or emission of less than the calculated allowable organic HAP, determine the mass of each coating material applied on the web coating line or group of web coating lines controlled by a common control device during the month.

(vi) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in § 63.3360(c).

(vii) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material as-applied during the month following the procedure in § 63.3360(d).

(viii) ***Organic HAP emitted.*** Calculate the organic HAP emitted during the month for each month using Equation 16:

$$H_e = (1-R)\left(\sum_{i=1}^{p} C_{ahi} M_i\right) - M_{vret} \qquad \text{Equation 16}$$

Where:

H_e = Total monthly organic HAP emitted, kg.

R = Overall organic HAP control efficiency, percent.

p = Number of different coating materials applied in a month.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(ix) ***Organic HAP emission rate based on coating solids applied.*** Calculate the organic HAP emission rate based on coating solids applied using Equation 13 of this section.

(x) ***Organic HAP emission rate based on coating materials applied.*** Calculate the organic HAP emission rate based on coating material applied using Equation 14 of this section.

(xi) ***Compare actual performance to the performance required by compliance option.*** The affected source is in compliance with the emission standards in § 63.3320(b) for each month if the capture system is operated such that the average capture system operating parameter is greater than or less than (as appropriate) the operating parameter value established in accordance with § 63.3350(f); and

(A) The organic volatile matter collection and recovery efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(B) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(C) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(D) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (m) of this section.

(k) ***Capture and control system compliance demonstration procedures using a CPMS.*** If you use an add-on control device, you must demonstrate initial compliance for each capture system and each control device through performance tests and demonstrate continuing compliance through continuous monitoring of capture system and control device operating parameters as specified in paragraphs (k)(1) through (3) of this section. Compliance is determined in accordance with paragraph (k)(4) or (k)(5) of this section.

(1) Determine the control device destruction or removal efficiency using the applicable test methods and procedures in § 63.3360(e).

(2) Determine the emission capture efficiency in accordance with § 63.3360(f).

(3) Whenever a web coating line is operated, continuously monitor the operating parameters established according to § 63.3350(e) and (f).

(4) ***No operating limit deviations.*** You are in compliance with the emission standards in § 63.3320(b) if the thermal oxidizer is operated such that the average combustion temperature does not fall more than 50 degrees Fahrenheit below the temperature established in accordance with § 63.3360(e)(3)(i) for each 3-hour period or if the catalytic oxidizer is operating such that the three-hour average temperature difference across the bed does not fall more than 80 percent of the average temperature established in accordance with § 63.3360(e)(3)(ii) and the minimum temperature is always 50 degrees Fahrenheit above the catalyst's ignition temperature, or the catalytic oxidizer average combustion temperature does not fall more than 50 °F below the temperature established in accordance with § 63.3360(e)(3)(ii) for each 3-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with § 63.3350(f); and

(i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (m) of this section.

(5) ***Operating limit deviations.*** If one or more operating limit deviations occurred during the monthly averaging period, compliance with the emission standards in § 63.3320(b) is determined by either assuming no control of emissions or by estimating the emissions using a control destruction efficiency curve during each 3-hour period that was a deviation. You are in compliance with the emission standards in § 63.3320(b) if, including the periods of deviations:

(i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (m) of this section.

(l) ***Oxidizer compliance demonstration procedures.*** If you use an oxidizer to control emissions to comply with this subpart, you must show compliance by following the procedures in paragraph (l)(1) of this section. Use the applicable equations specified in paragraph (l)(2) of this section to convert the monitoring and other data into units of the selected compliance option in paragraph (f) through (i) of this section. Compliance is determined in accordance with paragraph (l)(3) or (l)(4) of this section.

(1) Demonstrate initial compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters as specified in paragraphs (l)(1)(i) through (vi) of this section:

(i) Determine the oxidizer destruction efficiency using the procedure in § 63.3360(e).

(ii) Determine the capture system capture efficiency in accordance with § 63.3360(f).

(iii) ***Capture and control efficiency monitoring.*** Whenever a web coating line is operated, continuously monitor the operating parameters established in accordance with § 63.3350(e) and (f) to ensure capture and control efficiency.

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating materials applied, or emission of less than the calculated allowable organic HAP, determine the mass of each coating material applied on the web coating line or group of web coating lines controlled by a common oxidizer during the month.

(v) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in § 63.3360(c).

(vi) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material applied during the month following the procedure in § 63.3360(d).

(2) Convert the information obtained under paragraph (q)(1) of this section into the units of the selected compliance option using the calculation procedures specified in paragraphs (l)(2)(i) through (iv) of this section.

(i) ***Control efficiency.*** Calculate the overall organic HAP control efficiency achieved using Equation 15.

(ii) ***Organic HAP emitted.*** Calculate the organic HAP emitted during the month using Equation 16.

(iii) ***Organic HAP emission rate based on coating solids applied.*** Calculate the organic HAP emission rate based on coating solids applied for each month using Equation 13.

(iv) ***Organic HAP emission rate based on coating materials applied.*** Calculate the organic HAP emission rate based on coating material applied using Equation 14.

(3) ***No operating limit deviations.*** You are in compliance with the emission standards in § 63.3320(b) if the oxidizer is operated such that the average combustion temperature does not fall more than 50 degrees Fahrenheit below the temperature established in accordance with § 63.3360(e)(3)(i) for each 3-hour period, or the catalytic oxidizer average combustion temperature does not fall more than 50 degrees Fahrenheit below the temperature established in accordance with § 63.3360(e)(3)(ii) for each 3-hour period or the temperature difference across the bed does not fall more than 80 percent of the average temperature established in accordance with § 63.3360(e)(3)(ii) and the minimum temperature is always 50 degrees Fahrenheit above the catalyst's ignition temperature, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with § 63.3350(f); and

(i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (m) of this section.

(4) ***Operating limit deviations.*** If one or more operating limit deviations occurred during the monthly averaging period, compliance with the emission standards in § 63.3320(b) is determined by assuming no control of emissions or by estimating the emissions using a control destruction efficiency curve during each 3-hour period that was a deviation. You are in compliance with the emission standards in § 63.3320(b) if, including the periods of deviation:

(i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (m) of this section.

(m) ***Monthly allowable organic HAP emissions.*** This paragraph provides the procedures and calculations for determining monthly allowable organic HAP emissions for use in demonstrating compliance in accordance with paragraph (d), (i), (j)(1)(x)(D), (j)(2)(xi)(D), or (l)(3)(iv) of this section. You will need to determine the amount of coating material applied at greater than or equal to 20 mass percent coating solids and the amount of coating material applied at less than 20 mass percent coating solids. The allowable organic HAP limit is then calculated based on coating material applied at greater than or equal to 20 mass percent coating solids complying with 0.2 kg organic HAP per kg coating solids at an existing affected source or 0.08 kg organic HAP per kg coating solids at a new affected source, and coating material applied at less than 20 mass percent coating solids complying with 4 mass percent organic HAP at an existing affected source and 1.6 mass-percent organic HAP at a new affected source as follows:

(1) Determine the as-purchased mass of each coating material applied each month.

(2) Determine the as-purchased coating solids content of each coating material applied each month in accordance with § 63.3360(d)(1).

(3) Determine the as-purchased mass fraction of each coating material which was applied at 20 mass percent or greater coating solids content on an as-applied basis.

(4) Determine the total mass of each solvent, diluent, thinner, or reducer added to coating materials which were applied at less than 20 mass percent coating solids content on an as-applied basis each month.

(5) Calculate the monthly allowable organic HAP emissions using Equation 17 for an existing affected source:

$$H_a = 0.20\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.04\left[\sum_{i=1}^{p} M_i(1-G_i) + \sum_{j=1}^{q} M_{L_j}\right] \qquad \text{Equation 17}$$

Where:

H_a = Monthly allowable organic HAP emissions, kg.

p = Number of different coating materials applied in a month.

M_i = mass of as-purchased coating material, i, applied in a month, kg.

G_i = Mass fraction of each coating material, i, which was applied at 20 mass percent or greater coating solids content, on an as-applied basis, kg/kg.

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

q = Number of different materials added to the coating material.

M_{Lj} = Mass of non-coating-solids-containing coating material, j, added to coating-solids-containing coating materials which were applied at less than 20 mass percent coating solids content, on an as-applied basis, in a month, kg.

or Equation 18 for a new affected source:

$$H_a = 0.08\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.016\left[\sum_{i=1}^{p} M_i(1-G_i) + \sum_{j=1}^{q} M_{L_j}\right] \qquad \text{Equation 18}$$

Where:

H_a = Monthly allowable organic HAP emissions, kg.

p = Number of different coating materials applied in a month.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

G_i = Mass fraction of each coating material, i, which was applied at 20 mass percent or greater coating solids content, on an as-applied basis, kg/kg.

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

q = Number of different materials added to the coating material.

M_{Lj} = Mass of non-coating-solids-containing coating material, j, added to coating-solids-containing coating materials which were applied at less than 20 mass percent coating solids content, on an as-applied basis, in a month, kg.

(n) [Reserved]

(o) ***Combinations of capture and control.*** If you operate more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, you must calculate organic HAP emissions according to the procedures in paragraphs (o)(1) through (4) of this section, and use the calculation procedures specified in paragraph (o)(5) of this section to convert the monitoring and other data into units of the selected control option in paragraphs (f) through (i) of this section. Use the procedures specified in paragraph (o)(6) of this section to demonstrate compliance.

(1) ***Solvent recovery system using liquid-liquid material balance compliance demonstration.*** If you choose to comply by means of a liquid-liquid material balance for each solvent recovery system used to control one or more web coating lines, you must determine the organic HAP emissions for those web coating lines controlled by that solvent recovery system either:

(i) In accordance with paragraphs (j)(1)(i) through (iii) and (v) through (vii) of this section, if the web coating lines controlled by that solvent recovery system have only always-controlled work stations; or

(ii) In accordance with paragraphs (j)(1)(ii), (iii), (v), and (vi) and (p) of this section, if the web coating lines controlled by that solvent recovery system have one or more never-controlled or intermittently-controlled work stations.

(2) ***Solvent recovery system using performance test compliance demonstration and CEMS.*** To demonstrate compliance through an initial test of capture efficiency, continuous monitoring of a capture system operating parameter, and a CEMS on each solvent recovery system used to control one or more web coating lines, you must:

(i) For each capture system delivering emissions to that solvent recovery system, monitor the operating parameter established in accordance with § 63.3350(f) to ensure capture system efficiency; and

(ii) Determine the organic HAP emissions for those web coating lines served by each capture system delivering emissions to that solvent recovery system either:

(A) In accordance with paragraphs (j)(2)(i) through (iii), (v), (vi), and (viii) of this section, if the web coating lines served by that capture and control system have only always-controlled work stations; or

(B) In accordance with paragraphs (j)(2)(i) through (iii), (vi), and (p) of this section, if the web coating lines served by that capture and control system have one or more never-controlled or intermittently-controlled work stations.

(3) ***Oxidizer.*** To demonstrate compliance through performance tests of capture efficiency and control device efficiency, continuous monitoring of capture system, and CPMS for control device operating parameters for each oxidizer used to control emissions from one or more web coating lines, you must:

(i) Monitor the operating parameter in accordance with § 63.3350(e) to ensure control device efficiency; and

(ii) For each capture system delivering emissions to that oxidizer, monitor the operating parameter established in accordance with § 63.3350(f) to ensure capture efficiency; and

(iii) Determine the organic HAP emissions for those web coating lines served by each capture system delivering emissions to that oxidizer either:

(A) In accordance with paragraphs (l)(1)(i) through (vi) of this section, if the web coating lines served by that capture and control system have only always-controlled work stations; or

(B) In accordance with paragraphs (l)(1)(i) through (iii), (v), and (p) of this section, if the web coating lines served by that capture and control system have one or more never-controlled or intermittently-controlled work stations.

(4) ***Uncontrolled coating lines.*** If you own or operate one or more uncontrolled web coating lines, you must determine the organic HAP applied on those web coating lines using Equation 10. The organic HAP emitted from an uncontrolled web coating line is equal to the organic HAP applied on that web coating line.

(5) Convert the information obtained under paragraphs (o)(1) through (4) of this section into the units of the selected compliance option using the calculation procedures specified in paragraphs (o)(5)(i) through (iv) of this section.

(i) ***Organic HAP emitted.*** Calculate the organic HAP emissions for the affected source for the month by summing all organic HAP emissions calculated according to paragraphs (o)(1), (o)(2)(ii), (o)(3)(iii), and (o)(4) of this section.

(ii) ***Coating solids applied.*** If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, the owner or operator must determine the coating solids content of each coating material applied during the month following the procedure in § 63.3360(d).

(iii) ***Organic HAP emission rate based on coating solids applied.*** Calculate the organic HAP emission rate based on coating solids applied for each month using Equation 13.

(iv) ***Organic HAP based on materials applied.*** Calculate the organic HAP emission rate based on material applied using Equation 14.

(6) ***Compliance.*** The affected source is in compliance with the emission standards in § 63.3320(b) for the month if all operating parameters required to be monitored under paragraphs (o)(1) through (3) of this section were maintained at the values established under §§ 63.3350 and 63.3360 and one of the standards in paragraphs (o)(6)(i) through (iv) of this section were met. If operating parameter deviations occurred, the affected source is in compliance with the emission standards in § 63.3320(b) for the month if, assuming no control of emissions or by estimating the emissions using a control destruction efficiency curve for each 3-hour deviation period, one of the standards in paragraphs (6)(i) through (iv) of this section were met.

(i) The total mass of organic HAP emitted by the affected source based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(ii) The total mass of organic HAP emitted by the affected source based on material applied is no more than 0.04 kg organic HAP per kg material applied at an existing affected source and no more than 0.016 kg organic HAP per kg material applied at a new affected source; or

(iii) The total mass of organic HAP emitted by the affected source during the month is less than the calculated allowable organic HAP as determined using paragraph (m) of this section; or

(iv) The total mass of organic HAP emitted by the affected source was not more than 5 percent of the total mass of organic HAP applied for the month at an existing affected source and no more than 2 percent of the total mass of organic HAP applied for the month at a new affected source. The total mass of organic HAP applied by the affected source in the month must be determined using Equation 10.

(p) ***Intermittently-controlled and never-controlled work stations.*** If you have been expressly referenced to this paragraph by paragraph (o)(1)(ii), (o)(2)(ii)(B), or (o)(3)(iii)(B) of this section for calculation procedures to determine organic HAP emissions for your intermittently-controlled and never-controlled work stations, you must:

(1) Determine the sum of the mass of all coating materials as-applied on intermittently-controlled work stations operating in bypass mode and the mass of all coating materials as-applied on never-controlled work stations during the month.

(2) Determine the sum of the mass of all coating materials as-applied on intermittently-controlled work stations operating in a controlled mode and the mass of all coating materials applied on always-controlled work stations during the month.

(3) ***Liquid-liquid material balance compliance demonstration.*** For each web coating line or group of web coating lines for which you use the provisions of paragraph (o)(1)(ii) of this section, you must calculate the organic HAP emitted during the month using Equation 19 of this section:

$$H_e = \left[\sum_{i=1}^{p} M_{Ci} C_{ahi}\right]\left[1-\frac{R_v}{100}\right] + \left[\sum_{i=1}^{p} M_{Bi} C_{ahi}\right] - M_{vret}$$

Equation 19

Where:

H_e = Total monthly organic HAP emitted, kg.

p = Number of different coating materials applied in a month.

M_{ci} = Sum of the mass of coating material, i, as-applied on intermittently-controlled work stations operating in controlled mode and the mass of coating material, i, as-applied on always-controlled work stations, in a month, kg.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

R_v = Organic volatile matter collection and recovery efficiency, percent.

M_{Bi} = Sum of the mass of coating material, i, as-applied on intermittently-controlled work stations operating in bypass mode and the mass of coating material, i, as-applied on never-controlled work stations, in a month, kg.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(4) ***Performance test to determine capture efficiency and control device efficiency.*** For each web coating line or group of web coating lines for which you use the provisions of paragraph (o)(2)(ii)(B) or (o)(3)(iii)(B) of this section, you must calculate the organic HAP emitted during the month using Equation 20:

$$H_e = \left[\sum_{i=1}^{p} M_{Ci} C_{ahi}\right]\left[1-\frac{R}{100}\right] + \left[\sum_{i=1}^{p} M_{Bi} C_{ahi}\right] - M_{vret}$$

Equation 20

Where:

H_e = Total monthly organic HAP emitted, kg.

p = Number of different coating materials applied in a month.

M_{ci} = Sum of the mass of coating material, i, as-applied on intermittently-controlled work stations operating in controlled mode and the mass of coating material, i, as-applied on always-controlled work stations, in a month, kg.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

R = Overall organic HAP control efficiency, percent.

M_{Bi} = Sum of the mass of coating material, i, as-applied on intermittently-controlled work stations operating in bypass mode and the mass of coating material, i, as-applied on never-controlled work stations, in a month, kg.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(q) ***Always-controlled work stations with more than one capture and control system.*** If you operate more than one capture system or more than one control device and only have always-controlled work stations, then you are in compliance with the emission standards in § 63.3320(b)(1) for the month if for each web coating line or group of web coating lines controlled by a common control device:

(1) The volatile matter collection and recovery efficiency as determined by paragraphs (j)(1)(i), (iii), (v), and (vi) of this section is at least 95 percent at an existing affected source and at least 98 percent at a new affected source; or

(2) The overall organic HAP control efficiency as determined by paragraphs (j)(2)(i) through (iv) of this section for each web coating line or group of web coating lines served by that control device and a common capture system is at least 95 percent at an existing affected source and at least 98 percent at a new affected source; or

(3) The overall organic HAP control efficiency as determined by paragraphs (l)(1)(i) through (iii) and (l)(2)(i) of this section for each web coating line or group of web coating lines served by that control device and a common capture system is at least 95 percent at an existing affected source and at least 98 percent at a new affected source.

(r) ***Mass-balance approach.*** As an alternative to § 63.3370(b) through (p), you may demonstrate monthly compliance using a mass-balance approach in accordance with this section, except for any month that you elect to meet the emission limitation in § 63.3320(b)(4). The mass-balance approach should be performed as follows:

(1) Separately for each individual/grouping(s) of lines, you must sum the mass of organic HAP emitted during the month and divide by the corresponding total mass of all organic HAP applied on the lines, or total mass of coating materials applied on the lines, or total mass of coating solids applied on the lines, for the same period, in accordance with the emission limitation that you have elected at § 63.3320(b)(1) through (3) for the month's demonstration. You may also choose to use volatile organic content as a surrogate for organic HAP for the compliance demonstration in accordance with § 63.3360(d). You are required to include all emissions and inputs that occur during periods that each line or grouping of lines operates in accordance with the applicability criteria in § 63.3300.

(2) You must include all of the organic HAP emitted by your individual/grouping(s) of lines, as follows.

(i) You must record the mass of organic HAP or volatile organic content utilized at all work stations of all of your individually/grouping(s) of lines. You must additionally record the mass of all coating materials applied at these work stations if you are demonstrating compliance for the month with the emission limitation at § 63.3320(b)(2) (the “coating materials” option). You must additionally record the mass of all coating solids applied at these work stations if you are demonstrating compliance for the month with the emission limitation at § 63.3320(b)(3) (the “coating solids” option).

(ii) You must assume that all of the organic HAP input to all never-controlled work stations is emitted, unless you have determined an emission factor in accordance with § 63.3360(g).

(iii) For all always-controlled work stations, you must assume that all of the organic HAP or volatile organic content is emitted, less the reductions provided by the corresponding capture system and control device, in accordance with the most recently measured capture and destruction efficiencies, or in accordance with the measured mass of volatile organic compounds (VOC) recovered for the month (*e.g.,* carbon control or condensers). You may account for organic HAP or volatile organic content retained in the coated web or otherwise not emitted if you have determined an emission factor in accordance with § 63.3360(g).

(iv) For all intermittently-controlled work stations, you must assume that all of the organic HAP or volatile organic content is emitted during periods of no control. During periods of control, you must assume that all of the organic HAP or volatile organic content is emitted, less the reductions provided by the corresponding capture system and control device, in accordance with the most recently measured capture and destruction efficiencies, or in accordance with the measured mass of VOC recovered for the month (*e.g.,* carbon control or condensers). You may account for organic HAP or volatile organic content retained in the coated web or otherwise not emitted if you have determined an emission factor in accordance with § 63.3360(g).

(v) You must record the organic HAP or volatile organic content input to all work stations of your individual/grouping(s) of lines and the mass of coating materials and/or solids applied, if applicable, and determine corresponding emissions during all periods of operation, including malfunctions or startups and shutdowns of any web coating line or control device.

(3) You are in compliance with the emission standards in § 63.3320(b) if each of your individual/grouping(s) of lines, meets one of the requirements in paragraphs (r)(3)(i) through (iii) of this section, as applicable. If operating parameter limit deviations occurred, including periods that the oxidizer control device(s), if any, operated at an average combustion temperature more than 50 degrees Fahrenheit below the temperature established in accordance with § 63.3360(e), or the 3-hour average temperature difference across the catalyst bed at no less than 80 percent of this average temperature differential and the catalytic oxidizer maintained a minimum temperature 50 degrees Fahrenheit above the catalyst's ignition temperature, you are in compliance with the emission standards in § 63.3320(b) for the month, if assuming no control of emissions for each 3-hour deviation period (or in accordance with an alternate approved method), one of the requirements in paragraphs (r)(3)(i) through (iii) of this section was met.

(i) The total mass of organic HAP emitted by the affected source based on HAP applied is no more than 0.05 kg organic HAP per kg HAP applied at an existing affected source and no more than 0.02 kg organic HAP per kg HAP applied at a new affected source; or

(ii) The total mass of organic HAP emitted by the affected source based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The total mass of organic HAP emitted by the affected source based on material applied is no more than 0.04 kg organic HAP per kg material applied at an existing affected source and no more than 0.016 kg organic HAP per kg material applied at a new affected source.

(s) ***Non-HAP coating.*** You must demonstrate that all of the coatings applied at all of the web coating lines at the affected source have organic HAP contents below 0.1 percent by mass for OSHA-defined carcinogens as specified in section A.6.4 of appendix A to 29 CFR 1910.1200, and below 1.0 percent by mass for other organic HAP compounds using the procedures in § 63.3370(s)(1) through (3).

(1) Determine the organic HAP mass fraction of each coating material “as purchased” by following one of the procedures in paragraphs § 63.3360(c)(1) through (3) and determine the organic HAP mass fraction of each coating material “as applied” by following the procedures in paragraph § 63.3360(c)(4).

(2) Submit to your permitting authority a report certifying that all coatings applied at all of the web coating lines at your effected source are non-HAP coatings.

(3) Maintain records of coating formulations used as required in § 63.3410(a)(1)(iii).

(4) Resume reporting requirements if any of the coating formulations are modified to exceed the thresholds in § 63.3370(s) or new coatings which exceed the thresholds in paragraph (s) of this section are used.

[67 FR 72341, Dec. 4, 2002, as amended at 85 FR 41301, July 9, 2020]

Notifications, Reports, and Records

§ 63.3400 What notifications and reports must I submit?

(a) ***Reports.*** Each owner or operator of an affected source subject to this subpart must submit the reports specified in paragraphs (b) through (k) of this section to the Administrator.

(b) ***Initial notifications.*** You must submit an initial notification as required by § 63.9(b), using the procedure in § 63.3400(h).

(1) Initial notification for existing affected sources must be submitted no later than 1 year before the compliance date specified in § 63.3330(a), or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(2) Initial notification for new and reconstructed affected sources must be submitted as required by § 63.9(b).

(3) For the purpose of this subpart, a title V or part 70 permit application may be used in lieu of the initial notification required under § 63.9(b), provided the same information is contained in the permit application as required by § 63.9(b) and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA to implement and enforce this subpart.

(4) If you are using a permit application in lieu of an initial notification in accordance with paragraph (b)(3) of this section, the permit application must be submitted by the same due date specified for the initial notification.

(c) You must submit a semiannual compliance report according to paragraphs (c)(1) and (2) of this section.

(1) Compliance report dates.

(i) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.3330 and ending on June 30 or December 31, whichever date is the first date following the end of the calendar half immediately following the compliance date that is specified for your affected source in § 63.3330.

(ii) The first compliance report is due no later than July 31 or January 31, whichever date follows the end of the calendar half immediately following the compliance date that is specified for your affected source in § 63.3330. Prior to the electronic template being available in CEDRI for one year, the report must be postmarked or delivered by the aforementioned dates. After the electronic template has been available in CEDRI for 1 year, the next full report must be submitted electronically as described in paragraph (h) of this section.

(iii) 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.

(iv) Each subsequent compliance report must be submitted electronically no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(v) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and 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 (c)(1)(i) through (iv) of this section.

(2) ***Compliance report contents.*** The compliance report must contain the information in paragraphs (c)(2)(i) through (viii) of this section:

(i) Company name and address.

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

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

(iv) If there are no deviations from any emission limitations (emission limit or operating limit) that apply to you, a statement that there were no deviations from the emission limitations during the reporting period, and that no CMS was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted.

(v) For each deviation from an emission limitation (emission limit or operating limit) that applies to you and that occurs at an affected source where you are not using a CMS to comply with the emission limitations in this subpart, the compliance report must contain the following information:

(A) The total operating time of the web coating line(s) during the reporting period.

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

(C) An estimate of the quantity of each regulated pollutant emitted over the emission limits in § 63.3320 for each monthly period covered in the report if the source failed to meet an applicable emission limit of this subpart.

(vi) For each deviation from an emission limit occurring at an affected source where you are using a CEMS or CPMS to comply with the emission limit in this subpart, you must include the following information:

(A) The total operating time of the web coating line(s) during the reporting period.

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

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

(D) 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.

(E) A summary of the total duration (in hours) of each deviation during the reporting period and the total duration of each deviation as a percent of the total source operating time during that reporting period.

(F) 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.

(G) A summary of the total duration (in hours) of CEMS and/or CPMS downtime during the reporting period and the total duration of CEMS and/or CPMS downtime as a percent of the total source operating time during that reporting period.

(H) A breakdown of the total duration of CEMS and/or CPMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, non-monitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.

(I) The date of the latest CEMS and/or CPMS certification or audit.

(J) A description of any changes in CEMS, CPMS, or controls since the last reporting period.

(K) An estimate of the quantity of each regulated pollutant emitted over the emission limits in § 63.3320 for each monthly period covered in the report if the source failed to meet an applicable emission limit of this subpart.

(d) You must submit a Notification of Performance Tests as specified in §§ 63.7 and 63.9(e) if you are complying with the emission standard using a control device and you are required to conduct a performance test of the control device. This notification and the site-specific test plan required under § 63.7(c)(2) must identify the operating parameters to be monitored to ensure that the capture efficiency of the capture system and the control efficiency of the control device determined during the performance test are maintained. Unless EPA objects to the parameter or requests changes, you may consider the parameter approved.

(e) ***Notification of Compliance Status.*** You must submit a Notification of Compliance Status as specified in § 63.9(h). For affected sources that commence construction or reconstruction after September 19, 2019, the Notification of Compliance Status must be submitted electronically using the procedure in paragraph (h) of this section. For affected sources that commenced construction or reconstruction on or before September 19, 2019, the Notification of Compliance Status must be submitted electronically using the procedure in paragraph (h) starting July 9, 2021.

(f) ***Performance test reports.*** You must submit performance test reports as specified in § 63.10(d)(2) if you are using a control device to comply with the emission standard and you have not obtained a waiver from the performance test requirement or you are not exempted from this requirement by § 63.3360(b). Catalyst activity test results are not required to be submitted but must be maintained onsite. Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in paragraphs (f)(1) through (3) of this section. For affected sources that commence construction or reconstruction after September 19, 2019, the performance test reports must be submitted electronically using the procedure in paragraph (h) of this section. For affected sources that commenced construction or reconstruction on or before September 19, 2019, the performance test reports must be submitted electronically using the procedure in paragraph (h) starting July 9, 2021.

(1) ***Data collected using test methods supported by EPA's Electronic Reporting Tool (ERT) as listed on EPA's ERT website (https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert) at the time of the test.*** Submit the results of the performance test to EPA via CEDRI, which can be accessed through EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/).* The data must be submitted in a file format generated through the use of EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on EPA's ERT website.

(2) ***Data collected using test methods that are not supported by EPA's ERT as listed on EPA's ERT website at the time of the test.*** The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on EPA's ERT website. Submit the ERT generated package or alternative file to EPA via CEDRI.

(3) ***Confidential business information (CBI).*** If you claim some of the information submitted under paragraph (f)(1) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to EPA. The file must be generated through the use of EPA's ERT or an alternate electronic file consistent with the XML schema listed on EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to EPA via EPA's CDX as described in paragraph (f)(1) of this section.

(g) ***Performance evaluation reports.*** You must submit the results of performance evaluations within 60 days of completing each CMS performance evaluation (as defined in § 63.2) following the procedures specified in paragraphs (g)(1) through (3) of this section. For affected sources that commence construction or reconstruction after September 19, 2019, the performance evaluation reports must be submitted electronically using the procedure in paragraph (h) of this section. For affected sources that commenced construction or reconstruction on or before September 19, 2019, the performance evaluation reports must be submitted electronically using the procedure in paragraph (h) starting July 9, 2021.

(1) ***Performance evaluations of CMS measuring relative accuracy test audit (RATA) pollutants that are supported by EPA's ERT as listed on EPA's ERT website at the time of the evaluation.*** Submit the results of the performance evaluation to EPA via CEDRI, which can be accessed through EPA's CDX. The data must be submitted in a file format generated through the use of EPA's ERT. Alternatively, you may submit an electronic file consistent with the XML schema listed on EPA's ERT website.

(2) ***Performance evaluations of CMS measuring RATA pollutants that are not supported by EPA's ERT as listed on EPA's ERT website at the time of the evaluation.*** The results of the performance evaluation must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on EPA's ERT website. Submit the ERT generated package or alternative file to EPA via CEDRI.

(3) ***Confidential business information (CBI).*** If you claim some of the information submitted under paragraph (g)(1) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to EPA. The file must be generated through the use of EPA's ERT or an alternate electronic file consistent with the XML schema listed on EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to EPA via EPA's CDX as described in paragraph (g)(1) of this section.

(h) ***Electronic reporting.*** If you are required to submit reports following the procedure specified in this paragraph, you must submit reports to EPA via CEDRI, which can be accessed through EPA's CDX (*https://cdx.epa.gov/).* Initial notifications and notifications of compliance status must be submitted as portable document formats (PDF) to CEDRI using the attachment module of the ERT. You must use the semiannual compliance report template on the CEDRI website (*https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri)* for this subpart 1 year after it becomes available. The date report templates become available will be listed on the CEDRI website. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. If you claim some of the information required to be submitted via CEDRI is CBI, submit a complete report, including information claimed to be CBI to EPA. The report must be generated using the appropriate form on the CEDRI website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to EPA via EPA's CDX as described earlier in this paragraph.

(i) ***Extension for CDX/CEDRI outage.*** If you are required to electronically submit a report through CEDRI in EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (i)(1) through (7) of this section.

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning 5 business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

(4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(5) You must provide to the Administrator a written description identifying:

(i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(j) ***Extension for force majeure events.*** If you are required to electronically submit a report through CEDRI in EPA's CDX, you may assert a claim of force majeure for failure to timely comply with the reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in paragraphs (j)(1) through (5) of this section.

(1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.,* hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.,* large scale power outage).

(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

(i) A written description of the force majeure event;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

(k) ***SSM reports.*** For affected sources that commenced construction or reconstruction before September 19, 2019, you must submit SSM reports as specified in § 63.10(d)(5), except that the provisions in subpart A of this part pertaining to startups, shutdowns, and malfunctions do not apply unless a control device is used to comply with this subpart. On and after, July 9, 2021, and for affected sources that commence construction or reconstruction after September 19, 2019, this section is no longer relevant.

(1) If actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are not consistent with the procedures specified in the affected source's SSMP required by § 63.6(e)(3), the owner or operator must state such information in the report. The startup, shutdown, or malfunction report must consist of a letter containing the name, title, and signature of the responsible official who is certifying its accuracy and must be submitted to the Administrator.

(2) Separate startup, shutdown, and malfunction reports are not required if the information is included in the report specified in paragraph (c)(2)(vi) of this section.

[67 FR 72341, Dec. 4, 2002, as amended at 85 FR 41313, July 9, 2020; 85 FR 73905, Nov. 19, 2020]

§ 63.3410 What records must I keep?

(a) Each owner or operator of an affected source subject to this subpart must maintain the records specified in paragraphs (a)(1) and (2) of this section on a monthly basis in accordance with the requirements of § 63.10(b)(1):

(1) Records specified in § 63.10(b)(2) of all measurements needed to demonstrate compliance with this standard as indicated in Table 2 to subpart JJJJ of part 63, including:

(i) Continuous emission monitor data in accordance with the requirements of § 63.3350(d);

(ii) Control device and capture system operating parameter data in accordance with the requirements of § 63.3350(c), (e), and (f);

(iii) Organic HAP content data for the purpose of demonstrating compliance in accordance with the requirements of § 63.3360(c);

(iv) Volatile matter and coating solids content data for the purpose of demonstrating compliance in accordance with the requirements of § 63.3360(d);

(v) Overall control efficiency determination using capture efficiency and control device destruction or removal efficiency test results in accordance with the requirements of § 63.3360(e) and (f);

(vi) Material usage, organic HAP usage, volatile matter usage, and coating solids usage and compliance demonstrations using these data in accordance with the requirements of § 63.3370(b), (c), and (d); and

(vii) Emission factor development calculations and HAP content for coating materials used to develop the emission factor as needed for § 63.3360(g).

(2) Records specified in § 63.10(c) for each CMS operated by the owner or operator in accordance with the requirements of § 63.3350(b), as indicated in Table 2 to subpart JJJJ of part 63.

(b) Each owner or operator of an affected source subject to this subpart must maintain records of all liquid-liquid material balances performed in accordance with the requirements of § 63.3370. The records must be maintained in accordance with the applicable requirements of § 63.10(b).

(c) For each deviation from an operating limit occurring at an affected source, you must record the following information.

(1) The total operating time the web coating line(s) controlled by the corresponding add-on control device and/or emission capture system during the reporting period.

(2) Date, time, duration, and cause of the deviations.

(3) If the facility determines by its monthly compliance demonstration, in accordance with § 63.3370, as applicable, that the source failed to meet an applicable emission limit of this subpart, you must record the following for the corresponding affected equipment:

(i) Record an estimate of the quantity of HAP (or VOC if used a surrogate in accordance with § 63.3360(d)) emitted in excess of the emission limit for the month, and a description of the method used to estimate the emissions.

(ii) Record actions taken to minimize emissions in accordance with § 63.3340(a), and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

(d) Records of results from the annual catalyst activity test, if applicable.

(e) Any records required to be maintained by this part that are submitted electronically via EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

[85 FR 41316, July 9, 2020]

Delegation of Authority

§ 63.3420 What authorities may be delegated to the States?

(a) In delegating implementation and enforcement authority to a state, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (b) of this section must be retained by the EPA Administrator and not transferred to a state, local, or tribal agency.

(b) Authority which will not be delegated to state, local, or tribal agencies are listed in paragraphs (b)(1) and (2) of this section:

(1) Approval of alternate test method for organic HAP content determination under § 63.3360(c).

(2) Approval of alternate test method for volatile matter determination under § 63.3360(d).

[85 FR 41316, July 9, 2020]

Table 1 to Subpart JJJJ of Part 63—Operating Limits if Using Add-On Control Devices and Capture System

If you are required to comply with operating limits by § 63.3321, 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 operating limits by:
1. Thermal oxidizer	a. The average combustion temperature in any 3-hour period must not fall more than 50 °F below the combustion temperature limit established according to § 63.3360(e)(3)(i)	i. Collecting the combustion temperature data according to § 63.3350(e)(10); ii. Reducing the data to 3-hour block averages; and
		iii. Maintain the 3-hour average combustion temperature at or above the temperature limit.
2. Catalytic oxidizer	a. The average temperature at the inlet to the catalyst bed in any 3-hour period must not fall more than 50 degrees Fahrenheit below the combustion temperature limit established according to § 63.3360(e)(3)(ii)	i. Collecting the catalyst bed inlet temperature data according to § 63.3350(e)(10); ii. Reducing the data to 3-hour block averages; and iii. Maintain the 3-hour average catalyst bed inlet temperature at or above the temperature limit.
	b. The temperature rise across the catalyst bed must not fall below 80 percent of the limit established according to § 63.3360(e)(3)(ii), provided that the minimum temperature is always 50 degrees Fahrenheit above the catalyst's ignition temperature	i. Collecting the catalyst bed inlet and outlet temperature data according to § 63.3350(e)(10); ii. Reducing the data to 3-hour block averages; and iii. Maintain the 3-hour average temperature rise across the catalyst bed at or above the limit, and maintain the minimum temperature at least 50 degrees Fahrenheit above the catalyst's ignition temperature

For the following device:	You must meet the following operating limit:	And you must demonstrate continuous compliance with operating limits by:
3. Emission capture system	Submit monitoring plan to the Administrator that identifies operating parameters to be monitored according to § 63.3350(f)	Conduct monitoring according to the plan (§ 63.3350(f)(3)).

[85 FR 41316, July 9, 2020]

Table 2 to Subpart JJJJ of Part 63—Applicability of 40 CFR Part 63 General Provisions to Subpart JJJJ

You must comply with the applicable General Provisions requirements according to the following table:

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 63.1(a)(1)–(4)	Yes	
§ 63.1(a)(5)	No	Reserved.
§ 63.1(a)(6)–(8)	Yes	
§ 63.1(a)(9)	No	Reserved.
§ 63.1(a)(10)–(14)	Yes	
§ 63.1(b)(1)	No	Subpart JJJJ specifies applicability.
§ 63.1(b)(2)–(3)	Yes	
§ 63.1(c)(1)	Yes	
§ 63.1(c)(2)	No	Area sources are not subject to emission standards of subpart JJJJ.
§ 63.1(c)(3)	No	Reserved.
§ 63.1(c)(4)	Yes	
§ 63.1(c)(5)	Yes	
§ 63.1(c)(6)	Yes	
§ 63.1(d)	No	Reserved.
§ 63.1(e)	Yes	
§ 63.2	Yes	Additional definitions in subpart JJJJ.
§ 63.3(a)–(c)	Yes	
§ 63.4(a)(1)–(3)	Yes	
§ 63.4(a)(4)	No	Reserved.
§ 63.4(a)(5)	Yes	
§ 63.4(b)–(c)	Yes	
§ 63.5(a)(1)–(2)	Yes	
§ 63.5(b)(1)	Yes	
§ 63.5(b)(2)	No	Reserved.
§ 63.5(b)(3)–(6)	Yes	
§ 63.5(c)	No	Reserved.
§ 63.5(d)	Yes	

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 63.5(e)	Yes	
§ 63.5(f)	Yes	
§ 63.6(a)	Yes	Applies only when capture and control system is used to comply with the standard.
§ 63.6(b)(1)–(5)	No	§ 63.3330 specifies compliance dates.
§ 63.6(b)(6)	No	Reserved.
§ 63.6(b)(7)	Yes	
§ 63.6(c)(1)–(2)	Yes	
§ 63.6(c)(3)–(4)	No	Reserved.
§ 63.6(c)(5)	Yes	
§ 63.6(d)	No	Reserved.
§ 63.6(e)(1)(i)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019, see § 63.3340(a) for general duty requirement. Yes, for all other affected sources before July 9, 2021, and No thereafter, see § 63.3340(a) for general duty requirement.
§ 63.6(e)(1)(ii)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§ 63.6(e)(1)(iii)	Yes	
§ 63.6(e)(2)	No	Reserved.
§ 63.6(e)(3)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§ 63.6(f)(1)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§ 63.6(f)(2)–(3)	Yes	
§ 63.6(g)	Yes	
§ 63.6(h)	No	Subpart JJJJ does not require continuous opacity monitoring systems (COMS).
§ 63.6(i)(1)–(14)	Yes	
§ 63.6(i)(15)	No	Reserved.
§ 63.6(i)(16)	Yes	
§ 63.6(j)	Yes	
§ 63.7(a)–(d)	Yes	
§ 63.7(e)(1)	No	See § 63.3360(e)(2).
§ 63.7(e)(2)–(3)	Yes	
§ 63.7(f)–(h)	Yes	
§ 63.8(a)(1)–(2)	Yes	
§ 63.8(a)(3)	No	Reserved.
§ 63.8(a)(4)	No	Subpart JJJJ does not have monitoring requirements for flares.

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 63.8(b)	Yes	
§ 63.8(c)(1) and § 63.8(c)(1)(i)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019, see § 63.3340(a) for general duty requirement. Yes, for all other affected sources before July 9, 2021, and No thereafter, see § 63.3340(a) for general duty requirement.
§ 63.8(c)(1)(ii)	Yes	§ 63.8(c)(1)(ii) only applies if you use capture and control systems.
§ 63.8(c)(1)(iii)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§ 63.8(c)(2)–(3)	Yes	See § 63.3350(e)(10)(iv) for temperature sensor validation procedures
§ 63.8(c)(4)	No	§ 63.3350 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)	No	Subpart JJJJ does not require COMS.
§ 63.8(c)(6)–(8)	Yes	Provisions for COMS are not applicable.
§ 63.8(d)(1)–(2)	Yes	Refer to § 63.3350(e)(5) for CPMS quality control procedures to be included in the quality control program.
§ 63.8(d)(3)	No	§ 63.3350(e)(5) specifies the program of corrective action.
§ 63.8(e)–(f)	Yes	§ 63.8(e)(2) does not apply to CPMS. § 63.8(f)(6) only applies if you use CEMS.
§ 63.8(g)	Yes	Only applies if you use CEMS.
§ 63.9(a)	Yes	
§ 63.9(b)(1)	Yes	
§ 63.9(b)(2)	Yes	Except § 63.3400(b)(1) requires submittal of initial notification for existing affected sources no later than 1 year before compliance date.
§ 63.9(b)(3)–(5)	Yes	
§ 63.9(c)–(e)	Yes	
§ 63.9(f)	No	Subpart JJJJ does not require opacity and visible emissions observations.
§ 63.9(g)	Yes	Provisions for COMS are not applicable.
§ 63.9(h)(1)–(3)	Yes	
§ 63.9(h)(4)	No	Reserved.
§ 63.9(h)(5)–(6)	Yes	
§ 63.9(i)	Yes	
§ 63.9(j)	Yes	
§ 63.9(k)	Yes	Only as specified in § 63.9(j).
§ 63.10(a)	Yes	
§ 63.10(b)(1)	Yes	
§ 63.10(b)(2)(i)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§ 63.10(b)(2)(ii)	No	See § 63.3410 for recordkeeping of relevant information.
§ 63.10(b)(2)(iii)	Yes	§ 63.10(b)(2)(iii) only applies if you use a capture and control system.

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 63.10(b)(2)(iv)–(v)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§ 63.10(b)(2)(vi)–(xiv)	Yes	
§ 63.10(b)(3)	Yes	
§ 63.10(c)(1)	Yes	
§ 63.10(c)(2)–(4)	No	Reserved.
§ 63.10(c)(5)–(8)	Yes	
§ 63.10(c)(9)	No	Reserved.
§ 63.10(c)(10)–(14)	Yes	
§ 63.10(c)(15)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§ 63.10(d)(1)–(2)	Yes	
§ 63.10(d)(3)	No	Subpart JJJJ does not require opacity and visible emissions observations.
§ 63.10(d)(4)	Yes	
§ 63.10(d)(5)(i)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter. See § 63.3400(c) for malfunction reporting requirements.
§ 63.10(d)(5)(ii)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter. See § 63.3400(c) for malfunction reporting requirements.
§ 63.10(e)(1)–(2)	Yes	Provisions for COMS are not applicable.
§ 63.10(e)(3)–(4)	No	Subpart JJJJ does not require opacity and visible emissions observations.
§ 63.10(f)	Yes	
§ 63.11	No	Subpart JJJJ does not specify use of flares for compliance.
§ 63.12	Yes	
§ 63.13	Yes	
§ 63.14	Yes	Subpart JJJJ includes provisions for alternative ASME and ASTM test methods that are incorporated by reference.
§ 63.15	Yes	
§ 63.16	Yes	

[85 FR 41317, July 9, 2020, as amended at 85 FR 73905, Nov. 19, 2020]

Attachment D

Part 70 Operating Permit No: 081-47176-00005

Electronic Code of Federal Regulations

Title 40: Protection of Environment

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

Subpart KK—National Emission Standards for the Printing and Publishing Industry

SOURCE: 61 FR 27140, May 30, 1996, unless otherwise noted.

§63.820 Applicability.

(a) The provisions of this subpart apply to:

(1) Each new and existing facility that is a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.2, at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated, and

(2) Each new and existing facility at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated for which the owner or operator chooses to commit to and meets the criteria of paragraphs (a)(2)(i) and (ii) of this section for purposes of establishing the facility to be an area source of HAP with respect to this subpart. A facility which establishes area source status through some other mechanism, as described in paragraph (a)(7) of this section, is not subject to the provisions of this subpart.

(i) Use less than 9.1 Mg (10 tons) per each rolling 12-month period of each HAP at the facility, including materials used for source categories or purposes other than printing and publishing, and

(ii) Use less than 22.7 Mg (25 tons) per each rolling 12-month period of any combination of HAP at the facility, including materials used for source categories or purposes other than printing and publishing.

(3) Each facility for which the owner or operator chooses to commit to and meets the criteria stated in paragraph (a)(2) of this section shall be considered an area source, and is subject only to the provisions of §§63.829(d) and 63.830(b)(1) of this subpart.

(4) Each facility for which the owner or operator commits to the conditions in paragraph (a)(2) of this section may exclude material used in routine janitorial or facility grounds maintenance, personal uses by employees or other persons, the use of products for the purpose of maintaining electric, propane, gasoline and diesel powered motor vehicles operated by the facility, and the use of HAP contained in intake water (used for processing or noncontact cooling) or intake air (used either as compressed air or for combustion).

(5) Each facility for which the owner or operator commits to the conditions in paragraph (a)(2) of this section to become an area source, but subsequently exceeds either of the thresholds in paragraph (a)(2) of this section for any rolling 12-month period (without first obtaining and complying with other limits that keep its potential to emit HAP below major source levels), shall be considered in violation of its commitment for that 12-month period and shall be considered a major source of HAP beginning the first month after the end of the 12-month period in which either of the HAP-use thresholds was exceeded. As a major source of HAP, each such facility would be subject to the provisions of this subpart as noted in paragraph (a)(1) of this section and would no longer be eligible to use the provisions of paragraph (a)(2) of this section, even if in subsequent 12-month periods the facility uses less HAP than the thresholds in paragraph (a)(2) of this section.

(6) An owner or operator of an affected source subject to paragraph (a)(2) of this section who chooses to no longer be subject to paragraph (a)(2) of this section shall notify the Administrator of such change. If, by no longer being subject to paragraph (a)(2) of this section, the facility at which the affected source is located becomes a major source:

(i) The owner or operator of an existing source must continue to comply with the HAP usage provisions of paragraph (a)(2) of this section until the source is in compliance with all relevant requirements for existing affected sources under this subpart;

(ii) The owner or operator of a new source must continue to comply with the HAP usage provisions of paragraph (a)(2) of this section until the source is in compliance with all relevant requirements for new affected sources under this subpart.

(7) Nothing in this paragraph is intended to preclude a facility from establishing area source status by limiting its potential to emit through other appropriate mechanisms that may be available through the permitting authority.

(b) This subpart does not apply to research or laboratory equipment.

(c) In response to an action to enforce the standards set forth in this subpart, an owner or operator may assert an affirmative defense to a claim for civil penalties for exceedances of such standards that are caused by a malfunction, as defined in §63.2. Appropriate penalties may be assessed, however, if the owner or operator fails to meet the burden of proving all the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

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

(i) The excess emissions were caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, or a process to operate in a normal or usual manner; and could not have been prevented through careful planning, proper design or better operation and maintenance practices; and did not stem from any activity or event that could have been foreseen and avoided, or planned for; and were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

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

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

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

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

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

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

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

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

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

[61 FR 27140, May 30, 1996, as amended at 71 FR 29799, May 24, 2006; 76 FR 22597, Apr. 21, 2011]

§63.821 Designation of affected sources.

(a) The affected sources subject to this subpart are:

(1) All of the publication rotogravure presses and all related equipment, including proof presses, cylinder and parts cleaners, ink and solvent mixing and storage equipment, and solvent recovery equipment at a facility.

(2) All of the product and packaging rotogravure or wide-web flexographic printing presses at a facility plus any other equipment at that facility which the owner or operator chooses to include in accordance with paragraphs (a)(3) or (a)(4) of this section, except

(i) Proof presses, unless the owner or operator chooses to include proof presses in the affected source in accordance with paragraph (a)(5) of this section.

(ii) Any product and packaging rotogravure or wide-web flexographic press which is used primarily for coating, laminating, or other operations which the owner or operator chooses to exclude, provided that

(A) the sum of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press using product and packaging rotogravure print stations and the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press using wide-web flexographic print stations in each month never exceeds 5 percent of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press in that month, including all inboard and outboard stations; and

(B) The owner or operator maintains records as required in §63.829(f).

(3) The owner or operator of an affected source, as defined in paragraph (a)(2) of this section, may elect to include in that affected source stand-alone equipment subject to the following provisions:

(i) Stand-alone equipment meeting any of the criteria specified in this subparagraph is eligible for inclusion:

(A) The stand-alone equipment and one or more product and packaging rotogravure or wide-web flexographic presses are used to apply solids-containing materials to the same web or substrate; or

(B) The stand-alone equipment and one or more product and packaging rotogravure or wide-web flexographic presses apply a common solids-containing material; or

(C) A common control device is used to control organic HAP emissions from the stand-alone equipment and from one or more product and packaging rotogravure or wide-web flexographic printing presses;

(ii) All eligible stand-alone equipment located at the facility is included in the affected source; and

(iii) No product and packaging rotogravure or wide-web flexographic presses are excluded from the affected source under the provisions of paragraph (a)(2)(ii) of this section.

(4) The owner or operator of an affected source, as defined in paragraph (a)(2) of this section, may elect to include in that affected source narrow-web flexographic presses subject to the following provisions:

(i) Each narrow-web flexographic press meeting any of the criteria specified in this subparagraph is eligible for inclusion:

(A) The narrow-web flexographic press and one or more product and packaging rotogravure or wide-web flexographic presses are used to apply solids containing material to the same web or substrate; or

(B) The narrow-web flexographic press and one or more product and packaging rotogravure or wide-web flexographic presses apply a common solids-containing material; or

(C) A common control device is used to control organic HAP emissions from the narrow-web flexographic press and from one or more product and packaging rotogravure or wide-web flexographic presses; and

(ii) All eligible narrow-web flexographic presses located at the facility are included in the affected source.

(5) The owner or operator of an affected source, as defined in paragraph (a)(2) of this section, may elect to include in that affected source rotogravure proof presses or flexographic proof presses subject to the following provisions:

(i) Each proof press meeting any of the criteria specified in this subparagraph is eligible for inclusion.

(A) The proof press and one or more product and packaging rotogravure or wide-web flexographic presses apply a common solids-containing material; or

(B) A common control device is used to control organic HAP emissions from the proof press and from one or more product and packaging rotogravure or wide-web flexographic presses; and

(ii) All eligible proof presses located at the facility are included in the affected source.

(6) Affiliated operations such as mixing or dissolving of ink or coating ingredients prior to application; ink or coating mixing for viscosity adjustment, color tint or additive blending, or pH adjustment; cleaning of ink or coating lines and line parts; handling and storage of inks, coatings, and solvents; and conveyance and treatment of wastewater are part of the printing and publishing industry source category, but are not part of the product and packaging rotogravure or wide-web flexographic printing affected source.

(7) Other presses are part of the printing and publishing industry source category, but are not part of the publication rotogravure affected source or the product and packaging rotogravure or wide-web flexographic printing affected source and are, therefore, exempt from the requirements of this subpart except as provided in paragraph (a)(3) of this section.

(8) Narrow web-flexographic presses are part of the printing and publishing industry source category, but are not part of the publication rotogravure affected source or the product and packaging rotogravure or wide-web flexographic printing affected source and are, therefore, exempt from the requirements of this subpart except as provided in paragraphs (a)(3) through (5) of this section.

(b) Each product and packaging rotogravure or wide-web flexographic printing affected source at a facility that is a major source of HAP, as defined in 40 CFR 63.2, that complies with the criteria of paragraphs (b)(1) or (b)(2) on and after the applicable compliance date as specified in §63.826 of this subpart is subject only to the requirements of §§63.829(e) and 63.830(b)(1) of this subpart.

(1) The owner or operator of the affected source applies no more than 500 kilograms (kg) per month, for every month, of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials on product and packaging rotogravure or wide-web flexographic printing presses, or

(2) The owner or operator of the affected source applies no more than 400 kg per month, for every month, of organic HAP on product and packaging rotogravure or wide-web flexographic printing presses.

(c) Each product and packaging rotogravure or wide-web flexographic printing affected source at a facility that is a major source of HAP, as defined in 40 CFR 63.2, that complies with neither the criterion of paragraph (b)(1) nor (b)(2) of this section in any month after the applicable compliance date as specified in §63.826 of this subpart is, starting with that month, subject to all relevant requirements of this subpart and is no longer eligible to use the provisions of paragraph (b) of this section, even if in subsequent months the affected source does comply with the criteria of paragraphs (b)(1) or (b)(2) of this section.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29799, May 24, 2006]

§63.822 Definitions.

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

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

Always-controlled work station means a work station associated with a dryer from which the exhaust is delivered to a control device, with no provision for the dryer exhaust to bypass the control device. Sampling lines for analyzers and relief valves needed for safety purposes are not considered bypass lines.

Capture efficiency means the fraction of all organic HAP emissions generated by a process that are delivered to a control device, expressed as a percentage.

Capture system means a hood, enclosed room, or other means of collecting organic HAP emissions into a closed-vent system that exhausts to a control device.

Car-seal means a seal that is placed on a device that is used to change the position of a valve or damper (e.g., from open to closed) in such a way that the position of the valve or damper cannot be changed without breaking the seal.

Certified product data sheet (CPDS) means documentation furnished by suppliers of inks, coatings, varnishes, adhesives, primers, solvents, and other materials or by an independent third party that provides the organic HAP weight fraction of these materials determined in accordance with §63.827(b), or the volatile matter weight fraction or solids weight fraction determined in accordance with §63.827(c). A material safety data sheet (MSDS) may serve as a CPDS provided the MSDS meets the data requirements of §63.827(b) and (c). The purpose of the CPDS is to assist the owner or operator in demonstrating compliance with the emission limitations presented in §§63.824-63.825.

Coating means material applied onto or impregnated into a substrate for decorative, protective, or functional purposes. Such materials include, but are not limited to, solvent-borne coatings, waterborne coatings, wax coatings, wax laminations, extrusion coatings, extrusion laminations, 100 percent solid adhesives, ultra-violet cured coatings, electron beam cured coatings, hot melt coatings, and cold seal coatings. Materials used to form unsupported substrates such as calendaring of vinyl, blown film, cast film, extruded film, and coextruded film are not considered coatings.

Control device means a device such as a carbon adsorber or oxidizer which reduces the organic HAP in an exhaust gas by recovery or by destruction.

Control device efficiency means the ratio of organic HAP emissions recovered or destroyed by a control device to the total organic HAP emissions that are introduced into the control device, expressed as a percentage.

Day means a 24-consecutive-hour period.

Facility means all contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

Flexible packaging means any package or part of a package the shape of which can be readily changed. Flexible packaging includes, but is not limited to, bags, pouches, labels, liners and wraps utilizing paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials.

Flexographic press means an unwind or feed section, which may include more than one unwind or feed station (such as on a laminator), a series of individual work stations, one or more of which is a flexographic print station, any dryers (including interstage dryers and overhead tunnel dryers) associated with the work stations, and a rewind, stack, or collection section. The work stations may be oriented vertically, horizontally, or around the circumference of a single large impression cylinder. Inboard and outboard work stations, including those employing any other technology, such as rotogravure, are included if they are capable of printing or coating on the same substrate. A publication rotogravure press with one or more flexographic imprinters is not a flexographic press.

Flexographic print station means a print station on which a flexographic printing operation is conducted. A flexographic print station includes an anilox roller that transfers material to a raised image (type or art) on a plate cylinder. The material is then transferred from the image on the plate cylinder to the web or sheet to be printed. A flexographic print station may include a fountain roller to transfer material from the reservoir to the anilox roller, or material may be transferred directly from the reservoir to the anilox roller. The materials applied are of a fluid, rather than paste, consistency.

HAP applied means the organic HAP content of all inks, coatings, varnishes, adhesives, primers, solvent, and other materials applied to a substrate by a product and packaging rotogravure or wide-web flexographic printing affected source.

HAP used means the organic HAP applied by a publication rotogravure printing affected source, including all organic HAP used for cleaning, parts washing, proof presses, and all organic HAP emitted during tank loading, ink mixing, and storage.

Intermittently-controllable work station means a work station associated with a dryer with provisions for the dryer exhaust to be delivered to or diverted from a control device depending on the position of a valve or damper. Sampling lines for analyzers and relief valves needed for safety purposes are not considered bypass lines.

Month means a calendar month or a prespecified period of 28 days to 35 days.

Narrow-web flexographic press means a flexographic press that is not capable of printing substrates greater than 18 inches in width and that does not also meet the definition of rotogravure press (i.e., it has no rotogravure print stations).

Never-controlled work station means a work station which is not equipped with provisions by which any emissions, including those in the exhaust from any associated dryer, may be delivered to a control device.

Other press means a lithographic press, letterpress press, or screen printing press that does not meet the definition of rotogravure press or flexographic press (i.e., it has no rotogravure print stations and no flexographic print stations), and that does not print on fabric or other textiles as defined in the Printing, Coating, and Dyeing of Fabrics and Other Textiles NESHAP (40 CFR part 63, subpart OOOO), wood furniture components as defined in the Wood Furniture Manufacturing Operations NESHAP (40 CFR part 63, subpart JJ) or wood building products as defined in the Surface Coating of Wood Building Products NESHAP (40 CFR part 63, subpart QQQQ).

Overall Organic HAP control efficiency means the total efficiency of a control system, determined either by:

(1) The product of the capture efficiency and the control device efficiency or

(2) A liquid-liquid material balance.

Print station means a work station on which a printing operation is conducted.

Printing operation means the formation of words, designs, or pictures on a substrate other than wood furniture components as defined in the Wood Furniture Manufacturing Operations NESHAP (40 CFR part 63, subpart JJ), wood building products as defined in the Surface Coating of Wood Building Products NESHAP (40 CFR part 63, subpart QQQQ), and fabric or other textiles as defined in the Printing, Coating, and Dyeing of Fabric and Other Textiles NESHAP (40 CFR part 63, subpart OOOO), except for fabric or other textiles for use in flexible packaging.

Product and packaging rotogravure printing means the production, on a rotogravure press, of any printed substrate not otherwise defined as publication rotogravure printing. This includes, but is not limited to, folding cartons, flexible packaging, labels and wrappers, gift wraps, wall and floor coverings, upholstery, decorative laminates, and tissue products.

Proof press means any press which prints only non-saleable items used to check the quality of image formation of rotogravure cylinders or flexographic plates; substrates such as paper, plastic film, metal foil, or vinyl; or ink, coating varnish, adhesive, primer, or other solids-containing material.

Publication rotogravure press means a rotogravure press used for publication rotogravure printing. A publication rotogravure press may include one or more flexographic imprinters. A publication rotogravure press with one or more flexographic imprinters is not a flexographic press.

Publication rotogravure printing means the production, on a rotogravure press, of the following saleable paper products:

(1) Catalogues, including mail order and premium,

(2) Direct mail advertisements, including circulars, letters, pamphlets, cards, and printed envelopes,

(3) Display advertisements, including general posters, outdoor advertisements, car cards, window posters; counter and floor displays; point of purchase and other printed display material,

(4) Magazines,

(5) Miscellaneous advertisements, including brochures, pamphlets, catalog sheets, circular folders, announcements, package inserts, book jackets, market circulars, magazine inserts, and shopping news,

(6) Newspapers, magazine and comic supplements for newspapers, and preprinted newspaper inserts, including hi-fi and spectacolor rolls and sections,

(7) Periodicals, and

(8) Telephone and other directories, including business reference services.

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

Rotogravure press means an unwind or feed section, which may include more than one unwind or feed station (such as on a laminator), a series of individual work stations, one or more of which is a rotogravure print station, any dryers associated with the work stations, and a rewind, stack, or collection section. Inboard and outboard work stations, including those employing any other technology, such as flexography, are included if they are capable of printing or coating on the same substrate.

Rotogravure print station means a print station on which a rotogravure printing operation is conducted. A rotogravure print station includes a rotogravure cylinder and supply for ink or other solids containing material. The image (type and art) to be printed is etched or engraved below the surface of the rotogravure cylinder. On a rotogravure cylinder the printing image consists of millions of minute cells.

Stand-alone equipment means an unwind or feed section, which may include more than one unwind or feed station (such as on a laminator); a series of one or more work stations and any associated dryers; and a rewind, stack, or collection section that is not part of a product and packaging rotogravure or wide-web flexographic press. Stand-alone equipment is sometimes referred to as “off-line” equipment.

Wide-web flexographic press means a flexographic press capable of printing substrates greater than 18 inches in width.

Work station means a unit on which material is deposited onto a substrate.

(b) The symbols used in equations in this subpart are defined as follows:

(1) C_{ahi} = the monthly average, as-applied, organic HAP content of solids-containing material, i, expressed as a weight-fraction, kg/kg.

(2) C_{asi} = the monthly average, as applied, solids content, of solids-containing material, i, expressed as a weight-fraction, kg/kg.

(3) C_{hi} = the organic HAP content of ink or other solids-containing material, i, expressed as a weight-fraction, kg/kg.

(4) C_{hij} = the organic HAP content of solvent j, added to solids-containing material i, expressed as a weight-fraction, kg/kg.

(5) C_{hj} = the organic HAP content of solvent j, expressed as a weight-fraction, kg/kg.

(6) [Reserved]

(7) C_{si} = the solids content of ink or other material, i, expressed as a weight-fraction, kg/kg.

(8) C_{vi} = the volatile matter content of ink or other material, i, expressed as a weight-fraction, kg/kg.

(9) E = the organic volatile matter control efficiency of the control device, percent.

(10) F = the organic volatile matter capture efficiency of the capture system, percent.

(11) G_i = the mass fraction of each solids containing material, i, which was applied at 20 weight-percent or greater solids content, on an as-applied basis, kg/kg.

(12) H = the monthly organic HAP emitted, kg.

(13) H_a = the monthly allowable organic HAP emissions, kg.

(14) H_L = the monthly average, as-applied, organic HAP content of all solids-containing materials applied at less than 0.04 kg organic HAP per kg of material applied, kg/kg.

(15) H_s = the monthly average, as-applied, organic HAP to solids ratio, kg organic HAP/kg solids applied.

(16) H_{si} = the as-applied, organic HAP to solids ratio of material i.

(17) L = the mass organic HAP emission rate per mass of solids applied, kg/kg.

(18) M_{Bi} = the sum of the mass of solids-containing material, i, applied on intermittently-controllable work stations operating in bypass mode and the mass of solids-containing material, i, applied on never-controlled work stations, in a month, kg.

(19) M_{Bj} = the sum of the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on intermittently-controllable work stations operating in bypass mode and the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on never-controlled work stations, in a month, kg.

(20) M_{ci} = the sum of the mass of solids-containing material, i, applied on intermittently-controllable work stations operating in controlled mode and the mass of solids-containing material, i, applied on always-controlled work stations, in a month, kg.

(21) M_{cj} = the sum of the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on intermittently-controllable work stations operating in controlled mode and the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on always-controlled work stations in a month, kg.

(22) [Reserved]

(23) M_{fi} = the organic volatile matter mass flow rate at the inlet to the control device, kg/h.

(24) M_{fo} = the organic volatile matter mass flow rate at the outlet of the control device, kg/h.

(25) M_{hu} = the mass of organic HAP used in a month, kg.

(26) M_i = the mass of ink or other material, i, applied in a month, kg.

(27) M_{ij} = the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, added to solids-containing material, i, in a month, kg.

(28) M_j = the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied in a month, kg.

(29) M_{Lj} = the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, added to solids-containing materials which were applied at less than 20 weight-percent solids content, on an as-applied basis, in a month, kg.

(30) M_{vr} = the mass of volatile matter recovered in a month, kg.

(31) M_{vu} = the mass of volatile matter, including water, used in a month, kg.

(32) [Reserved]

(33) n = the number of organic compounds in the vent gas.

(34) p = the number of different inks, coatings, varnishes, adhesives, primers, and other materials applied in a month.

(35) q = the number of different solvents, thinners, reducers, diluents, or other non-solids-containing materials applied in a month.

(36) [Reserved]

(37) R = the overall organic HAP control efficiency, percent.

(38) R_e = the overall effective organic HAP control efficiency for publication rotogravure, percent.

(39) R_v = the organic volatile matter collection and recovery efficiency, percent.

(40) S = the mass organic HAP emission rate per mass of material applied, kg/kg.

(41) 0.0416 = conversion factor for molar volume, kg-mol/m^3(@ 293 K and 760 mmHg).

[61 FR 27140, May 30, 1996, as amended at 71 FR 29800, May 24, 2006; 76 FR 22598, Apr. 21, 2011]

§63.823 Standards: General.

(a) Table 1 to this subpart provides cross references to the 40 CFR part 63, subpart A, general provisions, indicating the applicability of the general provisions requirements to this subpart KK.

(b) Each owner or operator of an affected source subject to this subpart must at all times operate and maintain that affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[76 FR 22598, Apr. 21, 2011]

§63.824 Standards: Publication rotogravure printing.

(a) Each owner or operator of any publication rotogravure printing affected source that is subject to the requirements of this subpart shall comply with these requirements on and after the compliance dates as specified in §63.826 of this subpart.

(b) Each publication rotogravure affected source shall limit emissions of organic HAP to no more than eight percent of the total volatile matter used each month. The emission limitation may be achieved by overall control of at least 92 percent of organic HAP used, by substitution of non-HAP materials for organic HAP, or by a combination of capture and control technologies and substitution of materials. To demonstrate compliance, each owner or operator shall follow the procedure in paragraph (b)(1) of this section when emissions from the affected source are controlled by a solvent recovery device, the procedure in paragraph (b)(2) of this section when emissions from the affected source are controlled by an oxidizer, and the procedure in paragraph (b)(3) of this section when no control device is used.

(1) Each owner or operator using a solvent recovery device to control emissions shall demonstrate compliance by showing that the HAP emission limitation is achieved by following the procedures in either paragraph (b)(1)(i) or (b)(1)(ii) of this section:

(i) Perform a liquid-liquid material balance for each month as follows:

(A) Measure the mass of each ink, coating, varnish, adhesive, primer, solvent, and other material used by the affected source during the month.

(B) Determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent and other material used by the affected source during the month following the procedure in §63.827(b)(1).

(C) Determine the volatile matter content, including water, of each ink, coating, varnish, adhesive, primer, solvent, and other material used by the affected source during the month following the procedure in §63.827(c)(1).

(D) Install, calibrate, maintain and operate, according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile matter recovered by the solvent recovery device on a monthly basis. The device shall be initially certified by the manufacturer to be accurate to within ±2.0 percent.

(E) Measure the amount of volatile matter recovered for the month.

(F) Calculate the overall effective organic HAP control efficiency (R_e) for the month using Equation 1:

$$R_e = (100)\frac{M_{vu} - M_{hu} + \left[(M_{vr})(M_{hu} / M_{vu})\right]}{M_{vu}} \qquad Eq\ 1$$

For the purposes of this calculation, the mass fraction of organic HAP present in the recovered volatile matter is assumed to be equal to the mass fraction of organic HAP present in the volatile matter used.

(G) The affected source is in compliance for the month, if R_e is at least 92 percent each month.

(ii) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency as specified in paragraphs (b)(1)(ii)(A) through (b)(1)(ii)(E) of this section:

(A) Install continuous emission monitors to collect the data necessary to calculate the total organic volatile matter mass flow in the gas stream entering and the total organic volatile matter mass flow in the gas stream exiting the solvent recovery device for each month such that the percent control efficiency (E) of the solvent recovery device can be calculated for the month. This requires continuous emission monitoring of the total organic volatile matter concentration in the gas stream entering the solvent recovery device, the total organic volatile matter concentration in the gas stream exiting the solvent recovery device, and the volumetric gas flow rate through the solvent recovery device. A single continuous volumetric gas flow measurement should be sufficient for a solvent recovery device since the inlet and outlet volumetric gas flow rates for a solvent recovery device are essentially equal. Each month's individual inlet concentration values and corresponding individual gas flow rate values are multiplied and then summed to get the total organic volatile matter mass flow in the gas stream entering the solvent recovery device for the month. Each month's individual outlet concentration values and corresponding individual gas flow rate values are multiplied and then summed to get the total organic volatile matter mass flow in the gas stream exiting the solvent recovery device for the month.

(B) Determine the percent capture efficiency (F) of the capture system according to §63.827(e).

(C) Calculate the overall effective organic HAP control efficiency (R_e) achieved for each month using Equation 2.

$$R_e = (100)\frac{M_{vu} - M_{hu} + \left[(E/100)(F/100)M_{hu}\right]}{M_{vu}} \qquad Eq\ 2$$

(D) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameter established in accordance with §63.828(a)(5) whenever a publication rotogravure printing press is operated.

(E) The affected source is in compliance with the requirement for the month if R_e is at least 92 percent, and the capture device is operated at an average value greater than, or less than (as appropriate) the operating parameter value established in accordance with §63.828(a)(5) for each three-hour period.

(2) Each owner or operator using an oxidizer to control emissions shall demonstrate compliance by showing that the HAP emission limitation is achieved by following the procedure in either paragraph (b)(2)(i) or (b)(2)(ii) of this section:

(i) Demonstrate initial compliance through performance tests and continuing compliance through continuous monitoring as follows:

(A) Determine the oxidizer destruction efficiency (E) using the procedure in §63.827(d).

(B) Determine the capture efficiency (F) using the procedure in §63.827(e).

(C) [Reserved]

(D) Calculate the overall effective organic HAP control efficiency (R_e) achieved using Equation 2.

(E) The affected source is in initial compliance if R_e is at least 92 percent. Demonstration of continuing compliance is achieved by continuous monitoring of an appropriate oxidizer operating parameter in accordance with §63.828(a)(4), and by continuous monitoring of an appropriate capture system monitoring parameter in accordance with §63.828(a)(5). The affected source is in continuing compliance if the capture device is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with §63.828(a)(5), and

(*1*) if an oxidizer other than a catalytic oxidizer is used, the average combustion temperature for all three-hour periods is greater than or equal to the average combustion temperature established under §63.827(d), or

(*2*) if a catalytic oxidizer is used, the average catalyst bed inlet temperature for all three-hour periods is greater than or equal to the average catalyst bed inlet temperature established in accordance with §63.827(d).

(ii) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency. The percent control efficiency of the oxidizer shall be demonstrated in accordance with the requirements of paragraph (b)(1)(ii) of this section except that separate continuous measurements of the inlet volumetric gas flow rate and the outlet volumetric gas flow rate are required for an oxidizer.

(3) To demonstrate compliance without the use of a control device, each owner or operator shall compare the mass of organic HAP used to the mass of volatile matter used each month, as specified in paragraphs (b)(3)(i) through (b)(3)(iv) of this section:

(i) Measure the mass of each ink, coating, varnish, adhesive, primer, solvent, and other material used in the affected source during the month.

(ii) Determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material used during the month following the procedure in §63.827(b)(1), and

(iii) Determine the volatile matter content, including water, of each ink, coating, varnish, adhesive, primer, solvent, and other material used during the month following the procedure in §63.827(c)(1).

(iv) The affected source is in compliance for the month if the mass of organic HAP used does not exceed eight percent of the mass of volatile matter used.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29801, May 24, 2006]

§63.825 Standards: Product and packaging rotogravure and wide-web flexographic printing.

(a) Each owner or operator of any product and packaging rotogravure or wide-web flexographic printing affected source that is subject to the requirements of this subpart shall comply with these requirements on and after the compliance dates as specified in §63.826 of this subpart.

(b) Each product and packaging rotogravure or wide-web flexographic printing affected source shall limit organic HAP emissions to no more than 5 percent of the organic HAP applied for the month; or to no more than 4 percent of the mass of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied for the month; or to no more than 20 percent of the mass of solids applied for the month; or to a calculated equivalent allowable mass based on the organic HAP and solids contents of the inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied for the month. The owner or operator of each product and packaging rotogravure or wide-web flexographic printing affected source shall demonstrate compliance with this standard by following one of the procedures in paragraphs (b)(1) through (b)(10) of this section:

(1) Demonstrate that each ink, coating, varnish, adhesive, primer, solvent, diluent, reducer, thinner, and other material applied during the month contains no more than 0.04 weight-fraction organic HAP, on an as-purchased basis, as determined in accordance with §63.827(b)(2).

(2) Demonstrate that each ink, coating, varnish, adhesive, primer, and other solids-containing material applied during the month contains no more than 0.04 weight-fraction organic HAP, on a monthly average as-applied basis as determined in accordance with paragraphs (b)(2)(i)-(ii) of this section. The owner or operator shall calculate the as-applied HAP content of materials which are reduced, thinned, or diluted prior to application, as follows:

(i) Determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, diluent, reducer, thinner, and other material applied on an as-purchased basis in accordance with §63.827(b)(2).

(ii) Calculate the monthly average as-applied organic HAP content, C_{ahi} of each ink, coating, varnish, adhesive, primer, and other solids-containing material using Equation 3.

$$C_{ahi} = \frac{\left(C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad Eq\ 3$$

(3)(i) Demonstrate that each ink, coating, varnish, adhesive, primer, and other solids-containing material applied, either

(A) Contains no more than 0.04 weight-fraction organic HAP on a monthly average as-applied basis, or

(B) Contains no more than 0.20 kg of organic HAP per kg of solids applied, on a monthly average as-applied basis.

(ii) The owner or operator may demonstrate compliance in accordance with paragraphs (b)(3)(ii) (A)-(C) of this section.

(A) Use the procedures of paragraph (b)(2) of this section to determine which materials meet the requirements of paragraph (b)(3)(i)(A) of this section,

(B) Determine the as-applied solids content following the procedure in §63.827(c)(2) of all materials which do not meet the requirements of paragraph (b)(3)(i)(A) of this section. The owner or operator may calculate the monthly average as-applied solids content of materials which are reduced, thinned, or diluted prior to application, using Equation 4, and

$$C_{asi} = \frac{C_{si}M_i}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad Eq\ 4$$

(C) Calculate the as-applied organic HAP to solids ratio, H_{si}, for all materials which do not meet the requirements of paragraph (b)(3)(i)(A) of this section, using Equation 5.

$$H_{si} = \frac{C_{ahi}}{C_{asi}} \qquad Eq\ 5$$

(4) Demonstrate that the monthly average as-applied organic HAP content, H_L, of all materials applied is less than 0.04 kg HAP per kg of material applied, as determined by Equation 6.

$$H_L = \frac{\sum_{i=1}^{p} M_i C_{hi} + \sum_{j=1}^{q} M_j C_{hj}}{\sum_{i=1}^{p} M_i + \sum_{j=1}^{q} M_j} \qquad Eq\ 6$$

(5) Demonstrate that the monthly average as-applied organic HAP content on the basis of solids applied, H_s, is less than 0.20 kg HAP per kg solids applied as determined by Equation 7.

$$H_S = \frac{\sum_{i=1}^{p} M_i C_{hi} + \sum_{j=1}^{q} M_j C_{hj}}{\sum_{i=1}^{p} M_i C_{si}} \qquad Eq\ 7$$

(6) Demonstrate that the total monthly organic HAP applied, H_{app}, as determined by Equation 8, is less than the calculated equivalent allowable organic HAP, H_a, as determined by paragraph (e) of this section.

$$H_{app} = \sum_{i=1}^{p} M_i C_{hi} + \sum_{j=1}^{q} M_j C_{hj} \qquad Eq.\ 8$$

Where:

H_{app} = Total monthly organic HAP applied, kg.

(7) Operate a capture system and control device and demonstrate an overall organic HAP control efficiency of at least 95 percent for each month. If the affected source operates more than one capture system or more than one control device, and has only always-controlled work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of either paragraph (f) or (h) of this section. If the affected source operates one or more never-controlled work stations or one or more intermittently-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance in accordance with the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(8) Operate a capture system and control device and limit the organic HAP emission rate to no more than 0.20 kg organic HAP emitted per kg solids applied as determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance following the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(9) Operate a capture system and control device and limit the organic HAP emission rate to no more than 0.04 kg organic HAP emitted per kg material applied as determined on a monthly average as-applied basis. If the affected

source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance following the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(10) Operate a capture system and control device and limit the monthly organic HAP emissions to less than the allowable emissions as calculated in accordance with paragraph (e) of this section. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance following the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(c) To demonstrate compliance with the overall organic HAP control efficiency requirement in §63.825(b)(7) or the organic HAP emissions limitation requirements in §63.825(b)(8)-(10), each owner or operator using a solvent recovery device to control emissions shall show compliance by following the procedures in either paragraph (c)(1) or (c)(2) of this section:

(1) Perform a liquid-liquid material balance for each and every month as follows:

(i) Measure the mass of each ink, coating, varnish, adhesive, primer, solvent and other material applied on the press or group of presses controlled by a common solvent recovery device during the month.

(ii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(b)(2).

(iii) Determine the volatile matter content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(c)(2).

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, determine the solids content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(c)(2).

(v) Install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile matter recovered by the solvent recovery device on a monthly basis. The device shall be initially certified by the manufacturer to be accurate to within ±2.0 percent.

(vi) Measure the amount of volatile matter recovered for the month.

(vii) Calculate the volatile matter collection and recovery efficiency, R_v, using Equation 9.

$$R_v = 100 \frac{M_{vr}}{\sum_{i=1}^{p} M_i C_{vi} + \sum_{j=1}^{q} M_j} \qquad Eq\ 9$$

(viii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, calculate the organic HAP emitted during the month, H, using Equation 10.

$$H = \left[1 - \frac{R_v}{100}\right]\left[\sum_{i=1}^{p}\left(C_{hi}M_i + \sum_{j=1}^{q}C_{hij}M_{ij}\right)\right] \qquad Eq\ 10$$

(ix) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, calculate the organic HAP emission rate based on solids applied, L, using Equation 11.

$$L = \frac{H}{\sum_{i=1}^{p} C_{si}M_i} \qquad Eq\ 11$$

(x) If demonstrating compliance on the basis of organic HAP emission rate based on materials applied, calculate the organic HAP emission rate based on material applied, S, using Equation 12.

$$S = \frac{H}{\sum_{i=1}^{p}\left[M_i + \sum_{j=1}^{q} M_{ij}\right]} \qquad Eq\ 12$$

(xi) The affected source is in compliance if

(A) The organic volatile matter collection and recovery efficiency, R_v, is 95 percent or greater, or

(B) The organic HAP emission rate based on solids applied, L, is 0.20 kg organic HAP per kg solids applied or less, or

(C) the organic HAP emission rate based on material applied, S, is 0.04 kg organic HAP per kg material applied or less, or

(D) the organic HAP emitted during the month, H, is less than the calculated allowable organic HAP, H_a, as determined using paragraph (e) of this section.

(2) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency following the procedures in paragraphs (c)(2)(i) through (c)(2)(xi) of this section:

(i) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on materials applied, or emission of less than the calculated allowable organic HAP, measure the mass of each ink, coating, varnish, adhesive, primer, solvent, and other material applied on the press or group of presses controlled by a common control device during the month.

(ii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(b)(2).

(iii) Install continuous emission monitors to collect the data necessary to calculate the total organic volatile matter mass flow in the gas stream entering and the total organic volatile mass flow in the gas stream exiting the solvent recovery device for each month such that the percent control efficiency (E) of the solvent recovery device can be calculated for the month. This requires continuous emission monitoring of the total organic volatile matter concentration in the gas stream entering the solvent recovery device, the total organic volatile matter concentration in the gas stream exiting the solvent recovery device, and the volumetric gas flow rate through the solvent recovery device. A single continuous volumetric gas flow measurement should be sufficient for a solvent recovery device since the inlet and outlet volumetric gas flow rates for a solvent recovery device are essentially equal. Each month's individual inlet concentration values and corresponding individual gas flow rate values are multiplied and then summed to get the total organic volatile matter mass flow in the gas stream entering the solvent recovery device for the month. Each month's individual outlet concentration values and corresponding individual gas flow rate values are multiplied and then summed to get the total organic volatile matter mass flow in the gas stream exiting the solvent recovery device for the month.

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, determine the solids content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(c)(2).

(v) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameter established in accordance with §63.828(a)(5) whenever a product and packaging rotogravure or wide-web flexographic printing press is operated.

(vi) Determine the capture efficiency (F) in accordance with §63.827(e)-(f).

(vii) Calculate the overall organic HAP control efficiency, (R), achieved for each month using Equation 13.

$$R = \frac{EF}{100} \qquad Eq\ 13$$

(viii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, calculate the organic HAP emitted during the month, H, for each month using Equation 14.

$$H = \left[1 - \left(\frac{E}{100}\frac{F}{100}\right)\right]\left[\sum_{i=1}^{p}\left(C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij}\right)\right] \qquad Eq\ 14$$

(ix) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, calculate the organic HAP emission rate based on solids applied, L, using Equation 15.

$$L = \frac{H}{\sum_{i=1}^{p} C_{si}M_i} \qquad Eq\ 15$$

(x) If demonstrating compliance on the basis of organic HAP emission rate based on materials applied, calculate the organic HAP emission rate based on material applied, S, using Equation 16.

$$S = \frac{H}{\sum_{i=1}^{p}\left[M_i + \sum_{j=1}^{q} M_{ij}\right]} \qquad Eq\ 16$$

(xi) The affected source is in compliance if the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with §63.828(a)(5) for each three hour period, and

(A) The organic volatile matter collection and recovery efficiency, R_v, is 95 percent or greater, or

(B) The organic HAP emission rate based on solids applied, L, is 0.20 kg organic HAP per kg solids applied or less, or

(C) The organic HAP emission rate based on material applied, S, is 0.04 kg organic HAP per kg material applied or less, or

(D) The organic HAP emitted during the month, H, is less than the calculated allowable organic HAP, H_a, as determined using paragraph (e) of this section.

(d) To demonstrate compliance with the overall organic HAP control efficiency requirement in §63.825(b)(7) or the overall organic HAP emission rate limitation requirements in §63.825(b)(8)-(10), each owner or operator using an oxidizer to control emissions shall show compliance by following the procedures in either paragraph (d)(1) or (d)(2) of this section:

(1) Demonstrate initial compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters following the procedures in paragraph (d)(1)(i) through (d)(1)(xi) of this section:

(i) Determine the oxidizer destruction efficiency (E) using the procedure in §63.827(d).

(ii) Determine the capture system capture efficiency (F) in accordance with §63.827(e)-(f).

(iii) Calculate the overall organic HAP control efficiency, (R), achieved using Equation 13.

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on materials applied, or emission of less than the calculated allowable organic HAP, measure the mass of each ink, coating, varnish, adhesive, primer, solvent, and other material applied on the press or group of presses controlled by a common control device during the month.

(v) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(b)(2).

(vi) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, determine the solids content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in §63.827(c)(2).

(vii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, calculate the organic HAP emitted during the month, H, for each month using Equation 14.

(viii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, calculate the organic HAP emission rate based on solids applied, L, for each month using Equation 15.

(ix) If demonstrating compliance on the basis of organic HAP emission rate based on materials applied, calculate the organic HAP emission rate based on material applied, S, using Equation 16.

(x) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameters established in accordance with §63.828(a)(4)-(5) whenever a product and packaging rotogravure or wide-web flexographic press is operating.

(xi) The affected source is in compliance, if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with §63.828(a)(4) for each three-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with §63.828(a)(5) for each three hour period, and

(A) The overall organic HAP control efficiency, R, is 95 percent or greater, or

(B) The organic HAP emission rate based on solids applied, L, is 0.20 kg organic HAP per kg solids applied or less, or

(C) The organic HAP emission rate based on material applied, S, is 0.04 kg organic HAP per kg material applied or less, or

(D) The organic HAP emitted during the month, H, is less than the calculated allowable organic HAP, H_a, as determined using paragraph (e) of this section.

(2) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency. The percent control efficiency of the oxidizer shall be demonstrated in accordance with the requirements of paragraph (c)(2) of this section except that separate continuous volumetric gas flow measurements of the inlet and outlet volumetric gas flow rates are required for an oxidizer.

(e) Owners or operators may calculate the monthly allowable HAP emissions, H_a, for demonstrating compliance in accordance with paragraph (b)(6), (c)(1)(xi)(D), (c)(2)(xi)(D), or (d)(1)(xi)(D) of this section as follows:

(1) Determine the as-purchased mass of each ink, coating, varnish, adhesive, primer, and other solids-containing material applied each month, M_i.

(2) Determine the as-purchased solids content of each ink, coating, varnish, adhesive, primer, and other solids-containing material applied each month, in accordance with §63.827(c)(2), C_{si}.

(3) Determine the as-purchased mass fraction of each ink, coating, varnish, adhesive, primer, and other solids-containing material which was applied at 20 weight-percent or greater solids content, on an as-applied basis, G_i.

(4) Determine the total mass of each solvent, diluent, thinner, or reducer added to materials which were applied at less than 20 weight-percent solids content, on an as-applied basis, each month, M_{Lj}.

(5) Calculate the monthly allowable HAP emissions, H_a, using Equation 17.

$$H_a = 0.20\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.04\left[\sum_{i=1}^{p} M_i\left(1-G_i\right) + \sum_{j=1}^{q} M_{Lj}\right] \qquad Eq\ 17$$

(f) Owners or operators of product and packaging rotogravure or wide-web flexographic printing presses shall demonstrate compliance according to the procedures in paragraphs (f)(1) through (f)(7) of this section if the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controllable work stations.

(1) The owner or operator of each solvent recovery system used to control one or more product and packaging rotogravure or wide-web flexographic presses for which the owner or operator chooses to comply by means of a liquid-liquid mass balance shall determine the organic HAP emissions for those presses controlled by that solvent recovery system either

(i) in accordance with paragraphs (c)(1)(i)-(iii) and (c)(1)(v)-(viii) of this section if the presses controlled by that solvent recovery system have only always-controlled work stations, or

(ii) in accordance with paragraphs (c)(1)(ii)-(iii), (c)(1)(v)-(vi), and (g) of this section if the presses controlled by that solvent recovery system have one or more never-controlled or intermittently-controllable work stations.

(2) The owner or operator of each solvent recovery system used to control one or more product and packaging rotogravure or wide-web flexographic presses, for which the owner or operator chooses to comply by means of an initial test of capture efficiency, continuous emission monitoring of the control device, and continuous monitoring of a capture system operating parameter, shall

(i) For each capture system delivering emissions to that solvent recovery system, monitor an operating parameter established in accordance with §63.828(a)(5) to assure capture system efficiency, and

(ii) Determine the organic HAP emissions for those presses served by each capture system delivering emissions to that solvent recovery system either

(A) In accordance with paragraphs (c)(2)(i)-(iii) and (c)(2)(v)-(viii) of this section if the presses served by that capture system have only always-controlled work stations, or

(B) In accordance with paragraphs (c)(2)(ii)-(iii), (c)(2)(v)-(vii), and (g) of this section if the presses served by that capture system have one or more never-controlled or intermittently-controllable work stations.

(3) The owner or operator of each oxidizer used to control emissions from one or more product and packaging rotogravure or wide-web flexographic presses choosing to demonstrate compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters, shall

(i) Monitor an operating parameter established in accordance with §63.828(a)(4) to assure control device efficiency, and

(ii) For each capture system delivering emissions to that oxidizer, monitor an operating parameter established in accordance with §63.828(a)(5) to assure capture efficiency, and

(iii) Determine the organic HAP emissions for those presses served by each capture system delivering emissions to that oxidizer either

(A) In accordance with paragraphs (d)(1)(i)-(v) and (d)(1)(vii) of this section if the presses served by that capture system have only always-controlled work stations, or

(B) In accordance with paragraphs (d)(1)(i)-(iii), (d)(1)(v), and (g) of this section if the presses served by that capture system have one or more never-controlled or intermittently-controllable work stations.

(4) The owner or operator of each oxidizer used to control emissions from one or more product and packaging rotogravure or wide-web flexographic presses choosing to demonstrate compliance through an initial capture efficiency test, continuous emission monitoring of the control device and continuous monitoring of a capture system operating parameter, shall

(i) For each capture system delivering emissions to that oxidizer, monitor an operating parameter established in accordance with §63.828(a)(5) to assure capture efficiency, and

(ii) Determine the organic HAP emissions for those presses served by each capture system delivering emissions to that oxidizer either

(A) In accordance with paragraphs (c)(2)(i)-(iii) and (c)(2)(v)-(viii) of this section if the presses served by that capture system have only always-controlled work stations, or

(B) In accordance with paragraphs (c)(2)(ii)-(iii), (c)(2)(v)-(vii), and (g) of this section if the presses served by that capture system have one or more never-controlled or intermittently-controllable work stations.

(5) The owner or operator of one or more uncontrolled product and packaging rotogravure or wide-web flexographic printing presses shall determine the organic HAP applied on those presses using Equation 8. The organic HAP emitted from an uncontrolled press is equal to the organic HAP applied on that press.

(6) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, the owner or operator shall determine the solids content of each

ink, coating, varnish, adhesive, primer, solvent and other material applied during the month following the procedure in §63.827(c)(2).

(7) The owner or operator shall determine the organic HAP emissions for the affected source for the month by summing all organic HAP emissions calculated according to paragraphs (f)(1), (f)(2)(ii), (f)(3)(iii), (f)(4)(ii), and (f)(5) of this section. The affected source is in compliance for the month, if all operating parameters required to be monitored under paragraphs (f)(2)-(4) of this section were maintained at the appropriate values, and

(i) The total mass of organic HAP emitted by the affected source was not more than four percent of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, diluents, reducers, thinners and other materials applied by the affected source, or

(ii) The total mass of organic HAP emitted by the affected source was not more than 20 percent of the total mass of solids applied by the affected source, or

(iii) The total mass of organic HAP emitted by the affected source was not more than the equivalent allowable organic HAP emissions for the affected source, H_a, calculated in accordance with paragraph (e) of this section, or

(iv) The total mass of organic HAP emitted by the affected source was not more than five percent of the total mass of organic HAP applied by the affected source. The total mass of organic HAP applied by the affected source in the month shall be determined by the owner or operator using Equation 8.

(g) Owners or operators determining organic HAP emissions from a press or group of presses having one or more never-controlled or intermittently-controllable work stations and using the procedures specified in paragraphs (f)(1)(ii), (f)(2)(ii)(B), (f)(3)(iii)(B), or (f)(4)(ii)(B) of this section shall for that press or group of presses:

(1) Determine the sum of the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on intermittently-controllable work stations in bypass mode and the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on never-controlled work stations during the month, M_{Bi}.

(2) Determine the sum of the mass of all solvents, reducers, thinners, and other diluents which are applied on intermittently-controllable work stations in bypass mode and the mass of all solvents, reducers, thinners, and other diluents which are applied on never-controlled work stations during the month, M_{Bj}.

(3) Determine the sum of the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on intermittently-controllable work stations in controlled mode and the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on always-controlled work stations during the month, M_{Bj}.

(4) Determine the sum of the mass of all solvents, reducers, thinners, and other diluents which are applied on intermittently-controllable work stations in controlled mode and the mass of all solvents, reducers, thinners, and other diluents which are applied on always-controlled work stations during the month, M_{Cj}.

(5) For each press or group of presses for which the owner or operator uses the provisions of paragraph (f)(1)(ii) of this section, the owner or operator shall calculate the organic HAP emitted during the month using Equation 18.

$$H = \left[\sum_{i=1}^{p} M_{Ci} C_{hi} + \sum_{j=1}^{q} M_{Cj} C_{hj}\right]\left[1 - \frac{M_{vr}}{\sum_{i=1}^{p} M_{Ci} C_{vi} + \sum_{j=1}^{q} M_{Cj}}\right] + \left[\sum_{i=1}^{p} M_{Bi} C_{hi} + \sum_{j=1}^{q} M_{Bj} C_{hj}\right] \qquad Eq\ 18$$

(6) For each press or group of presses for which the owner or operator uses the provisions of paragraphs (f)(2)(ii)(B), (f)(3)(iii)(B), or (f)(4)(ii)(B) of this section, the owner or operator shall calculate the organic HAP emitted during the month using Equation (19).

$$H = \left[\sum_{i=1}^{p} M_{ci} C_{hi} + \sum_{j=1}^{q} M_{cj} C_{hj}\right]\left[1 - \left(\frac{E}{100}\frac{F}{100}\right)\right] + \left[\sum_{i=1}^{p} M_{Bi} C_{hi} + \sum_{j=1}^{q} M_{Bj} C_{hj}\right] \qquad Eq\ 19$$

(h) If the affected source operates more than one capture system or more than one control device, and has no never-controlled work stations and no intermittently-controllable work stations, then the affected source is in compliance with the 95 percent overall organic HAP control efficiency requirement for the month if for each press or group of presses controlled by a common control device:

(1) The volatile matter collection and recovery efficiency, R_v, as determined by paragraphs (c)(1)(i), (c)(1)(iii), and (c)(1)(v)-(vii) of this section is equal to or greater than 95 percent, or

(2) The overall organic HAP control efficiency as determined by paragraphs (c)(2)(iii) and (c)(2)(v)-(vii) of this section for each press or group of presses served by that control device and a common capture system is equal to or greater than 95 percent and the average capture system operating parameter value for each capture system serving that control device is greater than or less than (as appropriate) the operating parameter value established for that capture system in accordance with §63.828(a)(5) for each three hour period, or

(3) The overall organic HAP control efficiency as determined by paragraphs (d)(1)(i)-(iii) and (d)(1)(x) of this section for each press or group of presses served by that control device and a common capture system is equal to or greater than 95 percent, the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with §63.828(a)(4) for each three hour period, and the average capture system operating parameter value for each capture system serving that control device is greater than or less than (as appropriate) the operating parameter value established for that capture system in accordance with §63.828(a)(5) for each three hour period.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29801, May 24, 2006]

§63.826 Compliance dates.

(a) The compliance date for an owner or operator of an existing affected source subject to the provisions of this subpart is May 30, 1999.

(b) The compliance date for an owner or operator of a new affected source subject to the provisions of this subpart is immediately upon start-up of the affected source, or May 30, 1996, whichever is later.

(c) Affected sources which have undergone reconstruction are subject to the requirements for new affected sources. The costs associated with the purchase and installation of air pollution control equipment are not considered in determining whether the affected source has been reconstructed. Additionally, the costs of retrofitting and replacement of equipment that is installed specifically to comply with this subpart are not considered reconstruction costs.

§63.827 Performance test methods.

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

(a) An owner or operator using a control device to comply with the requirements of §§63.824-63.825 is not required to conduct an initial performance test to demonstrate compliance if one or more of the criteria in paragraphs (a)(1) through (a)(3) of this section are met:

(1) A control device that is in operation prior to May 30, 1996, does not need to be tested if

(i) It is equipped with continuous emission monitors for determining total organic volatile matter concentration and the volumetric gas flow rate, and capture efficiency has been determined in accordance with the requirements of this subpart, such that an overall organic HAP control efficiency can be calculated, and

(ii) The continuous emission monitors are used to demonstrate continuous compliance in accordance with §63.824(b)(1)(ii), §63.825(b)(2)(ii), §63.825(c)(2), or §63.825(d)(2), as applicable, and §63.828, or

(2) The owner or operator has met the requirements of either §63.7(e)(2)(iv) or §63.7(h), or

(3) The control device is a solvent recovery system and the owner or operator chooses to comply by means of a monthly liquid-liquid material balance.

(b) Determination of the weight fraction organic HAP of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, diluents, and other materials used by a publication rotogravure affected source shall be conducted according to paragraph (b)(1) of this section. Determination of the weight fraction organic HAP of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, diluents, and other materials applied by a product and packaging rotogravure or wide-web flexographic printing affected source shall be conducted according to paragraph (b)(2) of this section. If the weight fraction organic HAP values are not determined using the procedures in paragraphs (b)(1) or (b)(2) of this section, the owner or operator must submit an alternative test method for determining their values for approval by the Administrator in accordance with §63.7(f). The recovery efficiency of the test method must be determined for all of the target organic HAP and a correction factor, if necessary, must be determined and applied.

(1) Each owner or operator of a publication rotogravure affected source shall determine the weight fraction organic HAP of each ink, coating, varnish, adhesive, primer, solvent, and other material used by following one of the procedures in paragraphs (b)(1)(i) through (iii) of this section:

(i) The owner or operator may test the material in accordance with Method 311 of appendix A of this part. The Method 311 determination may be performed by the owner or operator of the affected source, the supplier of the material, or an independent third party. The organic HAP content determined by Method 311 must be calculated according to the criteria and procedures in paragraphs (b)(1)(i)(A) through (C) of this section.

(A) Include each organic HAP determined to be present at greater than or equal to 0.1 weight percent for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 weight percent for other organic HAP compounds.

(B) Express the weight fraction of each organic HAP included according to paragraph (b)(1)(i)(A) of this section as a value truncated to four places after the decimal point (for example, 0.3791).

(C) Calculate the total weight fraction of organic HAP in the tested material by summing the weight fraction of each organic HAP included according to paragraph (b)(1)(i)(A) of this section and truncating the result to three places after the decimal point (for example, 0.763).

(ii) The owner or operator may determine the weight fraction volatile matter of the material in accordance with §63.827(c)(1) and use this value for the weight fraction organic HAP for all compliance purposes.

(iii) The owner or operator may use formulation data to determine the weight fraction organic HAP of a material. Formulation data may be provided to the owner or operator on a CPDS by the supplier of the material or an independent third party. Formulation data may be used provided that the weight fraction organic HAP is calculated according to the criteria and procedures in paragraphs (b)(1)(iii)(A) through (D) of this section. In the event of an inconsistency between the formulation data and the result of Method 311 of appendix A of this part, where the test result is higher, the Method 311 data will take precedence unless, after consultation, the owner or operator can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(A) For each raw material used in making the material, include each organic HAP present in that raw material at greater than or equal to 0.1 weight percent for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 weight percent for other organic HAP compounds. The weight fraction of each such organic HAP in each raw material must be determined by Method 311 of appendix A of this part, by an alternate method approved by the Administrator, or from a CPDS provided by the raw material supplier or an independent third party. The weight fraction of each such organic HAP in each raw material must be expressed as a value truncated to four places after the decimal point (for example, 0.1291).

(B) For each raw material used in making the material, the weight fraction contribution of each organic HAP, which is included according to paragraph (b)(1)(iii)(A) of this section, in that raw material to the weight fraction organic HAP of the material is calculated by multiplying the weight fraction, truncated to four places after the decimal point (for example, 0.1291), of that organic HAP in that raw material times the weight fraction of that raw material, truncated to four places after the decimal point (for example, 0.2246), in the material. The product of each such multiplication is to be truncated to four places after the decimal point (for example, 0.1291 times 0.2246 yields 0.02899586 which truncates to 0.0289).

(C) For each organic HAP which is included according to paragraph (b)(1)(iii)(A) of this section, the total weight fraction of that organic HAP in the material is calculated by adding the weight fraction contribution of that organic HAP from each raw material in which that organic HAP is included according to paragraph (b)(1)(iii)(A) of this section. The sum of each such addition must be expressed to four places after the decimal point.

(D) The total weight fraction of organic HAP in the material is the sum of the counted individual organic HAP weight fractions. This sum must be truncated to three places after the decimal point (for example, 0.763).

(2) Each owner or operator of a product and packaging rotogravure or wide-web flexographic printing affected source shall determine the organic HAP weight fraction of each ink, coating, varnish, adhesive, primer, solvent, and other material applied by following one of the procedures in paragraphs (b)(2)(i) through (iii) of this section:

(i) The owner or operator may test the material in accordance with Method 311 of appendix A of this part. The Method 311 determination may be performed by the owner or operator of the affected source, the supplier of the material, or an independent third party. The organic HAP content determined by Method 311 must be calculated according to the criteria and procedures in paragraphs (b)(2)(i)(A) through (C) of this section.

(A) Include each organic HAP determined to be present at greater than or equal to 0.1 weight percent for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 weight percent for other organic HAP compounds.

(B) Express the weight fraction of each organic HAP included according to paragraph (b)(2)(i)(A) of this section as a value truncated to four places after the decimal point (for example, 0.3791).

(C) Calculate the total weight fraction of organic HAP in the tested material by summing the weight fraction of each organic HAP included according to paragraph (b)(2)(i)(A) of this section and truncating the result to three places after the decimal point (for example, 0.763).

(ii) The owner or operator may determine the weight fraction volatile matter of the material in accordance with §63.827(c)(2) and use this value for the weight fraction organic HAP for all compliance purposes.

(iii) The owner or operator may use formulation data to determine the weight fraction organic HAP of a material. Formulation data may be provided to the owner or operator on a CPDS by the supplier of the material or an independent third party. Formulation data may be used provided that the weight fraction organic HAP is calculated according to the criteria and procedures in paragraphs (b)(2)(iii)(A) through (D) of this section. In the event of an inconsistency between the formulation data and the result of Method 311 of appendix A of this part, where the test result is higher, the Method 311 data will take precedence unless, after consultation, the owner or operator can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(A) For each raw material used in making the material, include each organic HAP present in that raw material at greater than or equal to 0.1 weight percent for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 weight percent for other organic HAP compounds. The weight fraction of each such organic HAP in each raw material must be determined by Method 311 of appendix A of this part, by an alternate method approved by the Administrator, or from a CPDS provided by the raw material supplier or an independent third party. The weight fraction of each such organic HAP in each raw material must be expressed as a value truncated to four places after the decimal point (for example, 0.1291).

(B) For each raw material used in making the material, the weight fraction contribution of each organic HAP, which is included according to paragraph (b)(2)(iii)(A) of this section, in that raw material to the weight fraction organic HAP of the material is calculated by multiplying the weight fraction, truncated to four places after the decimal point (for example, 0.1291), of that organic HAP in that raw material times the weight fraction of that raw material, truncated to four places after the decimal point (for example, 0.2246), in the material. The product of each such multiplication is truncated to four places after the decimal point (for example, 0.1291 times 0.2246 yields 0.02899586 which truncates to 0.0289).

(C) For each organic HAP which is included according to paragraph (b)(2)(iii)(A) of this section, the total weight fraction of that organic HAP in the material is calculated by adding the weight fraction contribution of that organic HAP from each raw material in which that organic HAP is included according to paragraph (b)(2)(iii)(A) of this section. The sum of each such addition must be expressed to four places after the decimal point.

(D) The total weight fraction of organic HAP in the material is the sum of the counted individual organic HAP weight fractions. This sum is to be truncated to three places after the decimal point (for example, 0.763).

(c) Determination of the weight fraction volatile matter content of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, diluents, and other materials used by a publication rotogravure affected source shall be conducted according to paragraph (c)(1) of this section. Determination of the weight fraction volatile matter content and weight fraction solids content of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, diluents, and other materials applied by a product and packaging rotogravure or wide-web flexographic printing affected source shall be conducted according to paragraph (c)(2) of this section.

(1) Each owner or operator of a publication rotogravure affected source shall determine the volatile matter weight fraction of each ink, coating, varnish, adhesive, primer, solvent, reducer, thinner, diluent, and other material used by following the procedures in paragraph (b)(1)(i) of this section, or by using formulation data as described in paragraph (c)(3) of this section.

(i) Determine the volatile matter weight fraction of the material using Method 24A of 40 CFR part 60, appendix A. The Method 24A determination may be performed by the owner or operator of the affected source, the supplier of the material, or an independent third party. The Method 24A result shall be truncated to three places after the decimal point (for example, 0.763). If these values cannot be determined using Method 24A, the owner or operator shall submit an alternative technique for determining their values for approval by the Administrator.

(2) Each owner or operator of a product and packaging rotogravure or wide-web flexographic printing affected source shall determine the volatile matter weight fraction and solids weight fraction of each ink, coating, varnish, adhesive, primer, solvent, reducer, thinner, diluent, and other material applied by following the procedures in paragraphs (b)(2)(i) and (ii) of this section, or by using formulation data as described in paragraph (c)(3) of this section.

(i) Determine the volatile matter weight fraction of the material using Method 24 of 40 CFR part 60, appendix A. The Method 24 determination may be performed by the owner or operator of the affected source, the supplier of the material, or an independent third party. The Method 24 result shall be truncated to three places after the decimal point (for example, 0.763). If these values cannot be determined using Method 24, the owner or operator shall submit an alternative technique for determining their values for approval by the Administrator.

(ii) Calculate the solids weight fraction Method 24 result by subtracting the volatile matter weight fraction Method 24 result from 1.000. This calculation may be performed by the owner or operator, the supplier of the material, or an independent third party.

(3) The owner or operator may use formulation data to determine the volatile matter weight fraction or solids weight fraction of a material. Formulation data may be provided to the owner or operator on a CPDS by the supplier of the material or an independent third party. The volatile matter weight fraction and solids weight fraction shall be truncated to three places after the decimal point (for example, 0.763). In the event of any inconsistency between the formulation data and the result of Method 24 or Method 24A of 40 CFR part 60, appendix A, where the test result for volatile matter weight fraction is higher or the test result for solids weight fraction is lower, the applicable test method

data will take precedence unless, after consultation, the owner or operator can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(d) A performance test of a control device to determine destruction efficiency for the purpose of meeting the requirements of §§63.824-63.825 shall be conducted by the owner or operator in accordance with the following:

(1) An initial performance test to establish the destruction efficiency of an oxidizer and the associated combustion zone temperature for a thermal oxidizer and the associated catalyst bed inlet temperature for a catalytic oxidizer shall be conducted and the data reduced in accordance with the following reference methods and procedures:

(i) Method 1 or 1A of 40 CFR part 60, appendix A is used for sample and velocity traverses to determine sampling locations.

(ii) Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A is used to determine gas volumetric flow rate.

(iii) Method 3 of 40 CFR part 60, appendix A is used for gas analysis to determine dry molecular weight.

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

(v) Methods 2, 2A, 3, and 4 of 40 CFR part 60, appendix A shall be performed, as applicable, at least twice during each test period.

(vi) Method 25 of 40 CFR part 60, appendix A, shall be used to determine organic volatile matter concentration, except as provided in paragraphs (d)(1)(vi)(A) through (D) of this section. The owner or operator shall submit notice of the intended test method to the Administrator for approval along with notice of the performance test required under §63.7(c). The same method must be used for both the inlet and outlet measurements. The owner or operator may use Method 25A of 40 CFR part 60, appendix A, if (A) An exhaust gas organic volatile matter concentration of 50 parts per million by volume (ppmv) or less as carbon is required to comply with the standards of §§63.824-63.825, or

(B) The organic volatile matter concentration at the inlet to the control system and the required level of control are such to result in exhaust gas organic volatile matter concentrations of 50 ppmv or less as carbon, or

(C) Because of the high efficiency of the control device, the anticipated organic volatile matter concentration at the control device exhaust is 50 ppmv or less as carbon, regardless of inlet concentration, or

(D) The control device is not an oxidizer.

(vii) Each performance test shall consist of three separate runs; each run conducted for at least one hour under the conditions that exist when the affected source is operating under normal operating conditions. For the purpose of determining organic volatile matter concentrations and mass flow rates, the average of results of all runs shall apply.

(viii) Organic volatile matter mass flow rates shall be determined using Equation 20:

$$M_f = Q_{sd} C_c [12.0] [0.0416] [10^{-6}] \qquad \text{Eq. 20}$$

Where:

M_f = Total organic volatile matter mass flow rate, kg/hour (h).

Q_{sd} = Volumetric flow rate of gases entering or exiting the control device, as determined according to §63.827(d)(1)(ii), dry standard cubic meters (dscm)/h.

C_c = Concentration of organic compounds as carbon, ppmv.

12.0 = Molecular weight of carbon.

0.0416 = Conversion factor for molar volume, kg-moles per cubic meter (mol/m3) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

(ix) Emission control device efficiency shall be determined using Equation 21:

$$E = \frac{M_{fi} - M_{fo}}{M_{fi}} \qquad Eq\ 21$$

(2) The owner or operator shall record such process information as may be necessary to determine the conditions of the performance test. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

(3) For the purpose of determining the value of the oxidizer operating parameter that will demonstrate continuing compliance, the time-weighted average of the values recorded during the performance test shall be computed. For an oxidizer other than catalytic oxidizer, the owner or operator shall establish as the operating parameter the minimum combustion temperature. For a catalytic oxidizer, the owner or operator shall establish as the operating parameter the minimum gas temperature upstream of the catalyst bed. These minimum temperatures are the operating parameter values that demonstrate continuing compliance with the requirements of §§63.824-63.825.

(e) A performance test to determine the capture efficiency of each capture system venting organic emissions to a control device for the purpose of meeting the requirements of §63.824(b)(1)(ii), §63.824(b)(2), §63.825(c)(2), §63.825(d)(1)-(2), §63.825(f)(2)-(4), or §63.825(h)(2)-(3) shall be conducted by the owner or operator in accordance with the following:

(1) You may assume your capture efficiency equals 100 percent if your capture system is a permanent total enclosure (PTE). You must confirm that your capture system is a PTE by demonstrating that it meets the requirements of section 6 of Method 204 of 40 CFR part 51, appendix M, and that all exhaust gases from the enclosure are delivered to a control device.

(2) You may determine capture efficiency according to the protocols for testing with temporary total enclosures that are specified in Methods 204 and 204A through F of 40 CFR part 51, appendix M. You may exclude never controlled work stations from such capture efficiency determinations.

(f) As an alternative to the procedures specified in §63.827(e) an owner or operator required to conduct a capture efficiency test may use any capture efficiency protocol and test methods that satisfy the criteria of either the Data Quality Objective (DQO) or the Lower Confidence Limit (LCL) approach as described in Appendix A of this subpart. The owner or operator may exclude never-controlled work stations from such capture efficiency determinations.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29802, May 24, 2006; 76 FR 22598, Apr. 21, 2011]

§63.828 Monitoring requirements.

(a) Following the date on which the initial performance test of a control device is completed, to demonstrate continuing compliance with the standard, the owner or operator shall monitor and inspect each control device required to comply with §§63.824-63.825 to ensure proper operation and maintenance by implementing the applicable requirements in paragraph (a)(1) through (a)(5) of this section.

(1) Owners or operators of product and packaging rotogravure or wide-web flexographic presses with intermittently-controllable work stations shall follow one of the procedures in paragraphs (a)(1)(i) through (a)(1)(iv) of this section for each dryer associated with such a work station:

(i) Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that provides a record indicating whether the exhaust stream from the dryer was directed to the control device or was diverted from the control device. The time and flow control position must be recorded at least once per hour, as well as every time the flow direction is changed. The flow control position indicator shall be installed at the entrance to any bypass line that could divert the exhaust stream away from the control device to the atmosphere.

(ii) Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration; a visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve or damper is maintained in the closed position and the exhaust stream is not diverted through the bypass line.

(iii) Ensure that any bypass line valve or damper is in the closed position through continuous monitoring of valve position. The monitoring system shall be inspected at least once every month to ensure that it is functioning properly.

(iv) Use an automatic shutdown system in which the press is stopped when flow is diverted away from the control device to any bypass line. The automatic system shall be inspected at least once every month to ensure that it is functioning properly.

(2) Compliance monitoring shall be subject to the provisions of paragraphs (a)(2)(i) and (a)(2)(ii) of this section, as applicable.

(i) All continuous emission monitors shall comply with performance specifications (PS) 8 or 9 of 40 CFR part 60, appendix B, as appropriate. The requirements of appendix F of 40 CFR part 60 shall also be followed. In conducting the quarterly audits required by appendix F, owners or operators must challenge the monitors with compounds representative of the gaseous emission stream being controlled.

(ii) All temperature monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturers specifications. The calibration of the chart recorder, data logger, or temperature indicator shall be verified every three months; or the chart recorder, data logger, or temperature indicator shall be replaced. The replacement shall be done either if the owner or operator chooses not to perform the calibration, or if the equipment cannot be calibrated properly.

(3) An owner or operator complying with §§63.824-63.825 through continuous emission monitoring of a control device shall install, calibrate, operate, and maintain continuous emission monitors to measure total organic volatile matter concentration and volumetric gas flow rate in accordance with §63.824(b)(1)(ii), §63.825(b)(2)(ii), §63.825(c)(2), or §63.825(d)(2), as applicable.

(4) An owner or operator complying with the requirements of §§63.824-63.825 through the use of an oxidizer and demonstrating continuous compliance through monitoring of an oxidizer operating parameter shall:

(i) For an oxidizer other than a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of ±1 percent of the temperature being monitored in °C or ±1 °C, whichever is greater. The thermocouple or temperature sensor shall be installed in the combustion chamber at a location in the combustion zone.

(ii) For a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature with an accuracy of ±1 percent of the temperature being monitored in °C or ±1 °C, whichever is greater. The thermocouple or temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet.

(5) An owner or operator complying with the requirements of §§63.824-63.825 through the use of a control device and demonstrating continuous compliance by monitoring an operating parameter to ensure that the capture efficiency measured during the initial compliance test is maintained, shall:

(i) Submit to the Administrator with the compliance status report required by §63.9(h) of the General Provisions, a plan that

(A) Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained,

(B) Discusses why this parameter is appropriate for demonstrating ongoing compliance, and

(C) Identifies the specific monitoring procedures;

(ii) Set the operating parameter value, or range of values, that demonstrate compliance with §§63.824-63.825, and

(iii) Conduct monitoring in accordance with the plan submitted to the Administrator unless comments received from the Administrator require an alternate monitoring scheme.

(b) Any excursion from the required operating parameters which are monitored in accordance with paragraphs (a)(4) and (a)(5) of this section, unless otherwise excused, shall be considered a violation of the emission standard.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29804, May 24, 2006]

§63.829 Recordkeeping requirements.

(a) The recordkeeping provisions of 40 CFR part 63 subpart A of this part that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart.

(b) Each owner or operator of an affected source subject to this subpart shall maintain the records specified in paragraphs (b)(1) through (b)(3) of this section on a monthly basis in accordance with the requirements of §63.10(b)(1) of this part:

(1) Records specified in §63.10(b)(2) of this part, of all measurements needed to demonstrate compliance with this standard, such as continuous emission monitor data, control device and capture system operating parameter data, material usage, HAP usage, volatile matter usage, and solids usage that support data that the source is required to report.

(2) Records specified in §63.10(b)(3) of this part for each applicability determination performed by the owner or operator in accordance with the requirements of §63.820(a) of this subpart, and

(3) Records specified in §63.10(c) of this part for each continuous monitoring system operated by the owner or operator in accordance with the requirements of §63.828(a) of this subpart.

(c) Each owner or operator of an affected source subject to this subpart shall maintain records of all liquid-liquid material balances performed in accordance with the requirements of §§63.824-63.825 of this subpart. The records shall be maintained in accordance with the requirements of §63.10(b) of this part.

(d) The owner or operator of each facility which commits to the criteria of §63.820(a)(2) shall maintain records of all required measurements and calculations needed to demonstrate compliance with these criteria, including the mass of all HAP containing materials used and the mass fraction of HAP present in each HAP containing material used, on a monthly basis.

(e) The owner or operator of each facility which meets the limits and criteria of §63.821(b)(1) shall maintain records as required in paragraph (e)(1) of this section. The owner or operator of each facility which meets the limits and criteria of §63.821(b)(2) shall maintain records as required in paragraph (e)(2) of this section. Owners or operators shall maintain these records for five years, and upon request, submit them to the Administrator.

(1) For each facility which meets the criteria of §63.821(b)(1), the owner or operator shall maintain records of the total mass of each material applied on product and packaging rotogravure or wide-web flexographic printing presses during each month.

(2) For each facility which meets the criteria of §63.821(b)(2), the owner or operator shall maintain records of the total mass and organic HAP content of each material applied on product and packaging rotogravure or wide-web flexographic printing presses during each month.

(f) The owner or operator choosing to exclude from an affected source, a product and packaging rotogravure or wide-web flexographic press which meets the limits and criteria of §63.821(a)(2)(ii)(A) shall maintain the records specified in paragraphs (f)(1) and (f)(2) of this section for five years and submit them to the Administrator upon request:

(1) The total mass of each material applied each month on the press, including all inboard and outboard stations, and

(2) The total mass of each material applied each month on the press by product and packaging rotogravure or wide-web flexographic printing operations.

(g) Each owner or operator of an affected source subject to this subpart shall maintain records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment), air pollution control equipment, or monitoring equipment.

(h) Each owner or operator of an affected source subject to this subpart shall maintain records of actions taken during periods of malfunction to minimize emissions in accordance with §63.823(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29804, May 24, 2006; 76 FR 22598, Apr. 21, 2011]

§63.830 Reporting requirements.

(a) The reporting provisions of 40 CFR part 63 subpart A of this part that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart.

(b) Each owner or operator of an affected source subject to this subpart shall submit the reports specified in paragraphs (b)(1) through (b)(6) of this section to the Administrator:

(1) An initial notification required in §63.9(b).

(i) Initial notifications for existing sources shall be submitted no later than one year before the compliance date specified in §63.826(a), or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(ii) Initial notifications for new and reconstructed sources shall be submitted as required by §63.9(b).

(iii) For the purpose of this subpart, a Title V or part 70 permit application may be used in lieu of the initial notification required under §63.9(b), provided the same information is contained in the permit application as required by §63.9(b), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA.

(iv) Permit applications shall be submitted by the same due dates as those specified for the initial notifications.

(2) A Notification of Performance Tests specified in §§63.7 and 63.9(e) of this part. This notification, and the site-specific test plan required under §63.7(c)(2) shall identify the operating parameter to be monitored to ensure that the capture efficiency measured during the performance test is maintained. The operating parameter identified in the site-specific test plan shall be considered to be approved unless explicitly disapproved, or unless comments received from the Administrator require monitoring of an alternate parameter.

(3) A Notification of Compliance Status specified in §63.9(h) of this part.

(4) Performance test reports specified in §63.10(d)(2) of this part.

(5) [Reserved]

(6) A summary report specified in §63.10(e)(3) of this part shall be submitted on a semi-annual basis (i.e., once every 6-month period). These summary reports are required even if the affected source does not have any control devices or does not take the performance of any control devices into account in demonstrating compliance with the emission limitations in §63.824 or §63.825. In addition to a report of operating parameter exceedances as required by §63.10(e)(3)(i), the summary report shall include, as applicable:

(i) Exceedances of the standards in §§63.824-63.825.

(ii) Exceedances of either of the criteria of §63.820(a)(2).

(iii) Exceedances of the criterion of §63.821(b)(1) and the criterion of §63.821(b)(2) in the same month.

(iv) Exceedances of the criterion of §63.821(a)(2)(ii)(A).

(v) 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 §63.823(b), including actions taken to correct a malfunction.

(c)(1) As of January 1, 2012, and within 60 days after the date of completing each performance test, as defined in §63.2 and as required in this subpart, you must submit performance test data, except opacity data, electronically to EPA's Central Data Exchange by using the ERT (see *http://www.epa.gov/ttn/chief/ert/ert tool.html/*) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

(2) All reports required by this subpart not subject to the requirements in paragraph (c)(1) of this section must be sent to the Administrator at the appropriate address listed in §63.13. If acceptable to both the Administrator and the owner or operator of a source, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to paragraph (c)(1) of this section in paper format.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29804, May 24, 2006; 76 FR 22598, Apr. 21, 2011; 85 FR 73895, Nov. 19, 2020]

§63.831 Implementation and enforcement.

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

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

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§63.820 through 63.821 and 63.823 through 63.826.

(2) Approval of alternatives to the test method for organic HAP content determination in §63.827(b) and alternatives to the test method for volatile matter in §63.827(c), and major alternatives to other test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

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

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

[68 FR 37354, June 23, 2003]

§§63.832-63.839 [Reserved]

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

General provisions reference	Applicable to subpart KK	Comment
§63.1(a)(1)-(a)(4)	Yes.	
§63.1(a)(5)	No	Section reserved.
§63.1(a)(6)-(a)(8)	No.	
§63.1(a)(9)	No	Section reserved.
§63.1(a)(10)-(a)(14)	Yes.	
§63.1(b)(1)	No	Subpart KK specifies applicability.
§63.1(b)(2)-(b)(3)	Yes.	
§63.1(c)(1)	Yes.	
§63.1(c)(2)	No	Area sources are not subject to subpart KK.
§63.1(c)(3)	No	Section reserved.
§63.1(c)(4)	Yes.	
§63.1(c)(5)	No.	
§63.1(c)(6)	Yes	
§63.1(d)	No	Section reserved.
§63.1(e)	Yes.	
§63.2	Yes	Additional definitions in subpart KK.
§63.3(a)-(c)	Yes.	
§63.4(a)(1)-(a)(3)	Yes.	
§63.4(a)(4)	No	Section reserved.
§63.4(a)(5)	Yes.	
§63.4(b)-(c)	Yes.	
§63.5(a)(1)-(a)(2)	Yes.	
§63.5(b)(1)	Yes.	
§63.5(b)(2)	No	Section reserved.
§63.5(b)(3)-(b)(6)	Yes.	
§63.5(c)	No	Section reserved.
§63.5(d)	Yes.	
§63.5(e)	Yes.	

General provisions reference	Applicable to subpart KK	Comment
§63.5(f)	Yes.	
§63.6(a)	Yes.	
§63.6(b)(1)-(b)(5)	Yes.	
§63.6(b)(6)	No	Section reserved.
§63.6(b)(7)	Yes.	
§63.6(c)(1)-(c)(2)	Yes.	
§63.6(c)(3)-(c)(4)	No	Sections reserved.
§63.6(c)(5)	Yes.	
§63.6(d)	No	Section reserved.
§63.6(e)(1)(i)	No	See 63.823(b) for general duty requirement. Any cross-reference to 63.6(e)(1)(i) in any other general provision incorporated by reference shall be treated as a cross-reference to 63.823(b).
§63.6(e)(1)(ii)	No	
§63.6(e)(1)(iii)	Yes.	
§63.6(e)(2)	No	Section reserved.
§63.6(e)(3)	No	
§63.6(f)(1)	No	
§63.6(f)(2)-(f)(3)	Yes.	
§63.6(g)	Yes.	
§63.6(h)	No	Subpart KK does not require COMS.
§63.6(i)(1)-(i)(14)	Yes.	
§63.6(i)(15)	No	Section reserved.
§63.6(i)(16)	Yes.	
§63.6(j)	Yes.	
§63.7(a)-(d)	Yes.	
§63.7(e)(1)	No	See 63.827 introductory text. Any cross-reference to 63.7(e)(1) in any other general provision incorporated by reference shall be treated as a cross-reference to 63.827 introductory text.
§63.7(e)(2)-(e)(4)	Yes.	
§63.8(a)(1)-(a)(2)	Yes.	
§63.8(a)(3)	No	Section reserved.
§63.8(a)(4)	No	Subpart KK specifies the use of solvent recovery devices or oxidizers.
§63.8(b)	Yes.	
§63.8(c)(1)-(3)	Yes.	
§63.8(c)(4)	No	Subpart KK specifies CMS sampling requirements.

General provisions reference	Applicable to subpart KK	Comment
§63.8(c)(5)	No	Subpart KK does not require COMS.
§63.8(c)(6)-(c)(8)	Yes	Provisions for COMS are not applicable.
§63.8(d)(1)-(2)	Yes.	
§63.8(d)(3)	Yes, except for last sentence.	
§63.8(e)-(f)	Yes.	
§63.8(g)	No	Subpart KK specifies CMS data reduction requirements.
§63.9(a)	Yes.	
§63.9(b)(1)	Yes.	
§63.9(b)(2)	Yes	Initial notification submission date extended.
§63.9(b)(3)-(b)(5)	Yes.	
§63.9(c)-(e)	Yes.	
§63.9(f)	No	Subpart KK does not require opacity and visible emissions observations.
§63.9(g)	Yes	Provisions for COMS are not applicable.
§63.9(h)(1)-(h)(3)	Yes.	
§63.9(h)(4)	No	Section reserved.
§63.9(h)(5)-(h)(6)	Yes.	
§63.9(i)	Yes.	
§63.9(j)	Yes.	
§63.9(k)	Yes	Only as specified in 63.9(j).
§63.10(a)	Yes.	
§63.10(b)(1)	Yes.	
§63.10(b)(2)(i)	No.	
§63.10(b)(2)(ii)	No	See 63.829(g) for recordkeeping of occurrence and duration of malfunctions. See 63.829(h) for recordkeeping of actions taken during malfunction. Any cross-reference to 63.10(b)(2)(ii) in any other general provision incorporated by reference shall be treated as a cross-reference to 63.829(g).
§63.10(b)(2)(iii)	Yes.	
§63.10(b)(2)(iv)-(b)(2)(v)	No.	
§63.10(b)(2)(vi)-(b)(2)(xiv)	Yes.	
§63.10(b)(3)	Yes.	
§63.10(c)(1)	Yes.	
§63.10(c)(2)-(c)(4)	No	Sections reserved.
§63.10(c)(5)-(c)(8)	Yes.	

General provisions reference	Applicable to subpart KK	Comment
§63.10(c)(9)	No	Section reserved.
§63.10(c)(10)	No	See 63.830(b)(6)(v) for reporting malfunctions. Any cross-reference to 63.10(c)(10) in any other general provision incorporated by reference shall be treated as a cross-reference to 63.830(b)(6)(v).
§63.10(c)(11)	No	See 63.830(b)(6)(v) for reporting malfunctions. Any cross-reference to 63.10(c)(11) in any other general provision incorporated by reference shall be treated as a cross-reference to 63.830(b)(6)(v).
§63.10(c)(12)-(c)(14)	Yes.	
§63.10(c)(15)	No.	
§63.10(d)(1)-(d)(2)	Yes.	
§63.10(d)(3)	No	Subpart KK does not require opacity and visible emissions observations.
§63.10(d)(4)	Yes.	
§63.10(d)(5)	No.	
§63.10(e)	Yes	Provisions for COMS are not applicable.
§63.10(f)	Yes.	
§63.11	No	Subpart KK specifies the use of solvent recovery devices or oxidizers.
§63.12	Yes.	
§63.13	Yes.	
§63.14	Yes.	
§63.15	Yes.	

[61 FR 27140, May 30, 1996, as amended at 76 FR 22598, Apr. 21, 2011; 85 FR 73895, Nov. 19, 2020]

Appendix A to Subpart KK of Part 63—Data Quality Objective and Lower Confidence Limit Approaches for Alternative Capture Efficiency Protocols and Test Methods

1. Introduction

1.1 Alternative capture efficiency (CE) protocols and test methods that satisfy the criteria of either the data quality objective (DQO) approach or the lower confidence limit (LCL) approach are acceptable under §63.827(f). The general criteria for alternative CE protocols and test methods to qualify under either the DQO or LCL approach are described in section 2. The DQO approach and criteria specific to the DQO approach are described in section 3. The LCL approach and criteria specific to the LCL approach are described in section 4. The recommended reporting for alternative CE protocols and test methods are presented in section 5. The recommended recordkeeping for alternative CE protocols and test methods are presented in section 6.

1.2 Although the Procedures L, G.1, G.2, F.1, and F.2 in §52.741 of part 52 were developed for TTE and BE testing, the same procedures can also be used in an alternative CE protocol. For example, a traditional liquid/gas mass balance CE protocol could employ Procedure L to measure liquid VOC input and Procedure G.1 to measure captured VOC.

2. General Criteria for DQO and LCL Approaches

2.1 The following general criteria must be met for an alternative capture efficiency protocol and test methods to qualify under the DQO or LCL approach.

2.2 An alternative CE protocol must consist of at least three valid test runs. Each test run must be at least 20 minutes long. No test run can be longer than 24 hours.

2.3 All test runs must be separate and independent. For example, liquid VOC input and output must be determined independently for each run. The final liquid VOC sample from one run cannot be the initial sample for another run. In addition, liquid input for an entire day cannot be apportioned among test runs based on production.

2.4 Composite liquid samples cannot be used to obtain an “average composition” for a test run. For example, separate initial and final coating samples must be taken and analyzed for each run; initial and final samples cannot be combined prior to analysis to derive an “average composition” for the test run.

2.5 All individual test runs that result in a CE of greater than 105 percent are invalid and must be discarded.

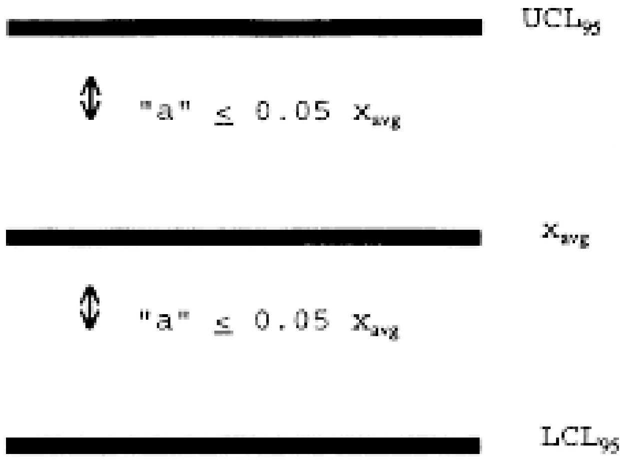
2.6 If the source can demonstrate to the regulatory agency that a test run should not be considered due to an identified testing or analysis error such as spillage of part of the sample during shipping or an upset or improper operating conditions that is not considered part of normal operation then the test result for that individual test run may be discarded. This limited exception allows sources to discard as “outliers” certain individual test runs without replacing them with a valid test run as long as the facility has at least three valid test runs to use when calculating its DQO or LCL. This exception is limited solely to test runs involving the types of errors identified above.

2.7 All valid test runs that are conducted must be included in the average CE determination. The individual test run CE results and average CE results cannot be truncated (i.e., 105 percent cannot be reported as 100 + percent) for purposes of meeting general or specific criteria for either the DQO or the LCL. If the DQO is satisfied and the average CE is greater than 100, then 100 percent CE must be considered the result of the test.

2.8 Alternative test methods for measuring VOC concentration must include a three-point calibration of the gas analysis instrument in the expected concentration range.

3. Data Quality Objective Approach

3.1 The purpose of the DQO is to allow sources to use alternative CE protocols and test methods while ensuring reasonable precision consistent with pertinent requirements of the Clean Air Act. In addition to the general criteria described in section 2, the specific DQO criterion is that the width of the two-sided 95 percent confidence interval of the mean measured value must be less than or equal to 10 percent of the mean measured value (see Figure 1). This ensures that 95 percent of the time, when the DQO is met, the actual CE value will be ±5 percent of the mean measured value (assuming that the test protocol is unbiased).



3.2 The DQO calculation is made as follows using Equations 1 and 2:

$$P = \left[\frac{a}{x_{avg}}\right]100 \qquad \text{Eq. 1}$$

$$a = \frac{t_{0.975}s}{\sqrt{n}} \qquad \text{Eq. 2}$$

Where:

a = Distance from the average measured CE value to the endpoints of the 95-percent (two-sided) confidence interval for the measured value.

n = Number of valid test runs.

P = DQO indicator statistic, distance from the average measured CE value to the endpoints of the 95-percent (two-sided) confidence interval, expressed as a percent of the average measured CE value.

s = Sample standard deviation.

$t_{0.975}$ = t-value at the 95-percent (two-sided) confidence level (see Table A-1).

x_{avg} = Average measured CE value (calculated from all valid test runs).

x_i = The CE value calculated from the ith test run.

TABLE **A-1—**t-VALUES

Number of valid test runs, n	**$t_{0.975}$**	**$t_{0.90}$**
1 or 2	N/A	N/A
3	4.303	1.886
4	3.182	1.638
5	2.776	1.533
6	2.571	1.476
7	2.447	1.440
8	2.365	1.415
9	2.306	1.397
10	2.262	1.383
11	2.228	1.372
12	2.201	1.363
13	2.179	1.356
14	2.160	1.350
15	2.145	1.345
16	2.131	1.341
17	2.120	1.337

Number of valid test runs, n	$t_{0.975}$	$t_{0.90}$
18	2.110	1.333
19	2.101	1.330
20	2.093	1.328
21	2.086	1.325

3.3 The sample standard deviation and average CE value are calculated using Equations 3 and 4 as follows:

$$s = \left[\frac{\sum_{i=1}^{n} \left(x_i - x_{avg} \right)^2}{n-1} \right]^{0.5} \qquad Eq\ 3$$

$$x_{avg} = \frac{\sum_{i=1}^{n} x_i}{n} \qquad Eq\ 4$$

3.4 The DQO criteria are achieved when all of the general criteria in section 2 are achieved and P ≤5 percent (i.e., the specific DQO criterion is achieved). In order to meet this objective, facilities may have to conduct more than three test runs. Examples of calculating P, given a finite number of test runs, are shown below. (For purposes of this example it is assumed that all of the general criteria are met.)

3.5 Facility A conducted a CE test using a traditional liquid/gas mass balance and submitted the following results and the calculations shown in Equations 5 and 6:

Run	**CE**
1	96.1
2	105.0
3	101.2

Therefore:

$n = 3$

$t_{0.975} = 4.30$

$x_{avg} = 100.8$

$s = 4.51$

$$a = \frac{(4.30)(4.51)}{\sqrt{n}} = 11.20 \qquad Eq\ 5$$

$$P = \frac{11.2}{100.8} 100 = 11.11 \qquad Eq\ 6$$

3.6 Since the facility did not meet the specific DQO criterion, they ran three more test runs.

Run	**CE**
4	93.2
5	96.2
6	87.6

3.7 The calculations for Runs 1-6 are made as follows using Equations 7 and 8:

$n = 6$

$t_{0.975} = 2.57$

$x_{avg} = 96.6$

$s = 6.11$

$$a = \frac{(2.57)(6.11)}{\sqrt{6}} = 6.41 \qquad Eq\ 7$$

$$P = \frac{6.41}{96.6} 100 = 6.64 \qquad Eq\ 8$$

3.8 The facility still did not meet the specific DQO criterion. They ran three more test runs with the following results:

Run	**CE**
7	92.9
8	98.3
9	91.0

3.9 The calculations for Runs 1-9 are made as follows using Equations 9 and 10:

$n = 9$

$t_{0.975} = 2.31$

$x_{avg} = 95.7$

$s = 5.33$

$$a = \frac{(2.31)(5.33)}{\sqrt{9}} = 4.10 \qquad Eq\ 9$$

$$P = \frac{4.10}{95.7}100 = 4.28 \qquad Eq\ 10$$

3.10 Based on these results, the specific DQO criterion is satisfied. Since all of the general criteria were also satisfied, the average CE from the nine test runs can be used to determine compliance.

4. Lower Confidence Limit Approach

4.1 The purpose of the LCL approach is to provide sources, that may be performing much better than their applicable regulatory requirement, a screening option by which they can demonstrate compliance. The approach uses less precise methods and avoids additional test runs which might otherwise be needed to meet the specific DQO criterion while still being assured of correctly demonstrating compliance. It is designed to reduce “false positive” or so called “Type II errors” which may erroneously indicate compliance where more variable test methods are employed. Because it encourages CE performance greater than that required in exchange for reduced compliance demonstration burden, the sources that successfully use the LCL approach could produce emission reductions beyond allowable emissions. Thus, it could provide additional benefits to the environment as well.

4.2 The LCL approach compares the 80 percent (two-sided) LCL for the mean measured CE value to the applicable CE regulatory requirement. In addition to the general criteria described in section 2, the specific LCL criteria are that either the LCL be greater than or equal to the applicable CE regulatory requirement or that the specific DQO criterion is met. A more detailed description of the LCL approach follows:

4.3 A source conducts an initial series of at least three runs. The owner or operator may choose to conduct additional test runs during the initial test if desired.

4.4 If all of the general criteria are met and the specific DQO criterion is met, then the average CE value is used to determine compliance.

4.5 If the data meet all of the general criteria, but do not meet the specific DQO criterion; and the average CE, using all valid test runs, is above 100 percent then the test sequence cannot be used to calculate the LCL. At this point the facility has the option of (a) conducting more test runs in hopes of meeting the DQO or of bringing the average CE for all test runs below 100 percent so the LCL can be used or (b) discarding all previous test data and retesting.

4.6 The purpose of the requirement in Section 4.5 is to protect against protocols and test methods which may be inherently biased high. This is important because it is impossible to have an actual CE greater than 100 percent and the LCL approach only looks at the lower end variability of the test results. This is different from the DQO which allows average CE values up to 105 percent because the DQO sets both upper and lower limits on test variability.

4.7 If at any point during testing the results meet the DQO, the average CE can be used for demonstrating compliance with the applicable regulatory requirement. Similarly, if the average CE is below 100 percent then the LCL can be used for demonstrating compliance with the applicable regulatory requirement without regard to the DQO.

4.8 The LCL is calculated at an 80 percent (two-sided) confidence level as follows using Equation 11:

$$LC_1 = x_{avg} - \frac{t_{0.90}\, s}{\sqrt{n}} \qquad Eq.\ 11$$

Where:

LC_1 = LCL at an 80-percent (two-sided) confidence level.

n = Number of valid test runs.

s = Sample standard deviation.

$t_{0.90}$ = t-value at the 80-percent (two-sided) confidence level (see Table A-1).

x_{avg} = Average measured CE value (calculated from all valid test runs).

4.9 The resulting LC_1 is compared to the applicable CE regulatory requirement. If LC_1 exceeds (i.e., is higher than) the applicable regulatory requirement, then a facility is in initial compliance. However, if the LC_1 is below the CE requirement, then the facility must conduct additional test runs. After this point the test results will be evaluated not only looking at the LCL, but also the DQO of ±5 percent of the mean at a 95 percent confidence level. If the test results with the additional test runs meet the DQO before the LCL exceeds the applicable CE regulatory requirement, then the average CE value will be compared to the applicable CE regulatory requirement for determination of compliance.

4.10 If there is no specific CE requirement in the applicable regulation, then the applicable CE regulatory requirement is determined based on the applicable regulation and an acceptable destruction efficiency test. If the applicable regulation requires daily compliance and the latest CE compliance demonstration was made using the LCL approach, then the calculated LC_1 will be the highest CE value which a facility is allowed to claim until another CE demonstration test is conducted. This last requirement is necessary to assure both sufficiently reliable test results in all circumstances and the potential environmental benefits referenced above.

4.11 An example of calculating the LCL is shown below. Facility B's applicable regulatory requirement is 85 percent CE. Facility B conducted a CE test using a traditional liquid/gas mass balance and submitted the following results and the calculation shown in Equation 12:

Run	**CE**
1	94.2
2	97.6
3	90.5

Therefore:

n = 3

$t_{0.90}$ = 1.886

x_{avg} = 94.1

s = 3.55

$$LC_1 = 94.1 - \frac{(1.886)(3.55)}{\sqrt{3}} = 90.23 \qquad Eq\ 12$$

4.12 Since the LC_1 of 90.23 percent is above the applicable regulatory requirement of 85 percent then the facility is in compliance. The facility must continue to accept the LC_1 of 90.23 percent as its CE value until a new series of valid tests is conducted. (The data generated by Facility B do not meet the specific DQO criterion.)

5. Recommended Reporting for Alternative CE Protocols

5.1 If a facility chooses to use alternative CE protocols and test methods that satisfy either the DQO or LCL and the additional criteria in section 4., the following information should be submitted with each test report to the appropriate regulatory agency:

1. A copy of all alternative test methods, including any changes to the EPA reference methods, QA/QC procedures and calibration procedures.

2. A table with information on each liquid sample, including the sample identification, where and when the sample was taken, and the VOC content of the sample;

3. The coating usage for each test run (for protocols in which the liquid VOC input is to be determined);

4. The quantity of captured VOC measured for each test run;

5. The CE calculations and results for each test run;

6. The DQO or LCL calculations and results; and

7. The QA/QC results, including information on calibrations (e.g., how often the instruments were calibrated, the calibration results, and information on calibration gases, if applicable).

6. Recommended Recordkeeping for Alternative CE Protocols.

6.1 A record should be kept at the facility of all raw data recorded during the test in a suitable form for submittal to the appropriate regulatory authority upon request.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29804, May 24, 2006]

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit Renewal

Source Description and Location

Source Name:	**Sonoco Flexible Packaging, Inc**
Source Location:	**6502 South US Highway 31, Edinburgh, IN 46124**
County:	**Johnson**
SIC Code:	**2671 (Packaging Paper & Plastic Film, Coated & Laminated)**
Permit Renewal No.:	**T 081-47176-00005**
Permit Reviewer:	**Kristen Squillace**

On October 30, 2023, Sonoco Flexible Packaging, Inc submitted an application to the Office of Air Quality (OAQ) requesting to renew its operating permit. OAQ has reviewed the operating permit renewal application from Sonoco Flexible Packaging, Inc relating to the operation of a stationary commercial printing operation. Sonoco Flexible Packaging, Inc was issued its third Part 70 Operating Permit Renewal (T 081-39034-00005) on July 30, 2019.

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T 081-39034-00005 on July 30, 2019. The source has since received the following approval:

(a) Title V Administrative Amendment No. 081-43261-00005, issued on September 22, 2020;

(b) Title V Significant Permit Modification No. 081-43719-00005, issued on May 03, 2021;

(c) Title V Significant Source Modification No. 081-45748-00005, issued on January 31, 2023; and

(d) Title V Significant Permit Modification No. 081-45790-00005, issued on February 17, 2023.

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.

Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 101 (6RL), constructed in 1987, having a maximum line speed of 1000 ft/min and a maximum printing width of 52 inches, using thermal oxidizer 6RL as control, using natural gas, with a heat input rate of 24.0 MMBtu/hr, and exhausting to stack S11. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.

(b) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 103 (8RL), constructed in 1995, having a maximum line speed of 1000 ft/min and a maximum printing width of 51.5 inches, using thermal oxidizer Megtec as control, using natural gas, with a heat input rate of 8.7 MMBtu/hr, and exhausting to stack 13. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

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

(c) One (1) 5X extrusion coater/laminator, identified as EU 201, constructed before 1987, using no control, and exhausting to stack 21. Product being coated is web substrate packaging material, application method used is roll coating, and consisting of the following units:

(1) One (1) extrusion laminator;

(2) One (1) coating/adhesive lamination deck;

(3) One (1) coating deck; and

(4) Two (2) coating station dryers, each rated at 1.5 MMBtu/hr.

Under 40 CFR 63, Subpart JJJJ, these units are considered affected facilities.

(d) One (1) 6X extrusion coater/laminator, identified as EU 204, constructed in 1996, using 6X thermal oxidizer as control, using natural gas, with a heat input rate of 4.7 MMBtu/hr, and exhausting to stack 15. Product being coated is web substrate packaging material, application method used is roll coating, and consisting of the following units:

(1) Two (2) extrusion laminators;

(2) Two (2) coating/adhesive lamination stations, identified as No. 1 and No. 2, each utilizing a gravure cylinder application system, each with a permanent total enclosure capture system, each coating a maximum of 43.2 million (MM) square inches per hour; and

(3) Two (2) coating/adhesive lamination station dryers, each rated at 1.5 MMBtu/hr.

Under 40 CFR 63, Subpart JJJJ, these units are considered affected facilities.

(e) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 104 (R17), approved in 2022 for construction, having a maximum line speed of 1312 ft/min and a maximum printing width of 52 inches, using thermal oxidizer Megtec as control, with a heat input rate of 8.7 MMBtu/hr, and exhausting to stack S13. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.

(f) One (1) 25L laminator, identified as EU 205, approved in 2022 for construction, using Megtec thermal oxidizer as control when using solvent borne coatings, with a heat input rate of 8.7 MMBtu/hr, and exhausting to stack S13. When coating using water-based coatings, the thermal oxidizer will not be operated, and emissions will be exhausted through stack 14. Product being coated is web substrate packaging material, application method used is roll coating, and consisting of the following units:

(1) Two (2) extrusion laminators;

(2) Two (2) coating/adhesive lamination stations, identified as No. 1 and No. 2, each utilizing a gravure cylinder application system, each with a permanent enclosure capture system, each coating a maximum of 43.1 million (MM) square inches per hour; and

(3) One (1) 8.0 MMBtu/hr hot oil system.

Under 40 CFR 63, Subpart JJJJ, these units are considered affected facilities.

(g) One (1) cold cleaner degreasing unit, identified as EU 102, constructed in 1987 and approved in 2019 for modification, using a distillation unit and the 6X thermal oxidizer as control, and exhausting to stack 15.

(h) One (1) cold cleaner degreasing unit, identified as EU 105, constructed in 1995, using a distillation unit and the 6X thermal oxidizer as control, and exhausting to stack 15.

(i) One (1) natural gas boiler, identified as Boiler EU 11 (No. 1), constructed in 1997, with a heat input capacity of 20.925 MMBtu/hr, and exhausting to stack 01.

Under 40 CFR 60, Subpart Dc, this unit is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this unit is considered an affected facility.

(j) One (1) natural gas boiler, identified as Boiler EU 12 (No. 2), constructed in 1998, with a heat input capacity of 20.925 MMBtu/hr, and exhausting to stack 02.

Under 40 CFR 60, Subpart Dc, this unit is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this unit is considered an affected facility.

(k) One (1) 11-head inkjet printer, identified as Inkjet Printer to print promotional codes, permitted in 2021, with a maximum of ink material usage of 0.94 liters per day per head, using no control, and exhausting indoors.

(l) One (1) 2-head inkjet printer, identified as QR Printer to print QR codes, permitted in 2021, with a maximum of ink material usage of 2.64 liters per day per head, using no control, and exhausting indoors.

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units:

(a) One (1) N-propyl alcohol storage tank;

Insignificant Activities

The source also consists of the following insignificant activities:

(a) One (1) natural gas heater for 5X extrusion coater/laminator, constructed before 1987, with a heat input capacity of 1.60 MMBtu/hr, and exhausting to stack 21.

(b) One (1) natural gas heater for 6X extrusion coater/laminator, constructed in 1996, with a heat input capacity of 1.60 MMBtu/hr, and exhausting to stack 13.

(c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: cutting torches, soldering equipment, and welding equipment.

(d) Closed loop heating and cooling systems.

(e) Heat exchanger cleaning and repair.

(f) Enclosed systems for conveying plastic raw materials and plastic finished goods.

(g) Blowdown for the following: boilers and compressors.

(h) Activities with potential uncontrolled emissions equal to or less than the thresholds below:

CO ≤ 25 lb/day	Pb ≤ 0.6 tpy or 3.29 lb/day	NO_X ≤ 5 lb/hr or 25 lb/day
PM_{10} ≤ 5 lb/hr or 25 lb/day	SO_2 ≤ 5 lb/hr or 25 lb/day	VOC ≤ 3 lb/hr or 15 lb/day

(1) One (1) N-propyl alcohol storage tank;

(2) One (1) ethyl alcohol storage tank;

(3) One (1) N-propyl acetate storage tank;

(4) One (1) ethyl acetate storage tank; and

(5) One (1) 50% N-Propyl Acetate/50% N-Propyl Alcohol storage tank.

Emission Units and Pollution Control Equipment Constructed Under the Provisions of 326 IAC 2-1.1-3 (Exemptions)

As part of this permitting action, the source requested to add the following existing emission unit(s) constructed under the provisions of 326 IAC 2-1.1-3 (Exemptions):

(a) One (1) 50% N-Propyl Acetate/50% N-Propyl Alcohol storage tank.

The total potential to emit of the emission unit(s) is less than levels specified at 326 IAC 2-1.1-3(e)(1)(A) through (G) and the addition of the emission unit(s) did not require the source to transition to a higher operation permit level. Therefore, pursuant to 326 IAC 2-1.1-3(e), the modification approval requirements under 326 IAC 2-7-10.5 , including the requirement to submit an application, do not apply to the emission unit(s). See Appendix A of this Technical Support Document for detailed emission calculations.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

County Attainment Status

The source is located in Johnson County.

Pursuant to amendments to Indiana Code IC 13-17-3-14, effective July 1, 2023, a federal regulation that classifies or amends a designation of attainment, nonattainment, or unclassifiable for any area in Indiana under the federal Clean Air Act is effective and enforceable in Indiana on the effective date of the federal regulation.

Pollutant	Designation
SO_2	Unclassifiable or attainment effective April 9, 2018, for the 2010 primary 1-hour SO_2 standard. Better than national secondary standards effective March 3, 1978.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective January 16, 2018, for the 2015 8-hour ozone standard.
$PM_{2.5}$	Unclassifiable or attainment effective April 15, 2015, for the 2012 annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Unclassifiable or attainment effective January 29, 2012, for the 2010 NO_2 standard.

Pollutant	Designation
Pb	Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Johnson County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements of Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Johnson County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements of Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Other Criteria Pollutants
Johnson County has been classified as attainment or unclassifiable in Indiana for all the 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 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B), and there is no applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

The fugitive emissions of hazardous air pollutants (HAP) are counted toward the determination of Part 70 Permit applicability and source status under Section 112 of the Clean Air Act (CAA).

Greenhouse Gas (GHG) Emissions

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

	Unrestricted Potential Emissions (ton/year)								
	PM[1]	PM_{10}[1]	$PM_{2.5}$[1, 2]	SO_2	NO_X	VOC	CO	Single HAP[3]	Total HAPs
Total PTE of Entire Source Excluding Fugitive Emissions*	4.31	6.64	6.64	0.25	40.90	15,319.15	34.36	48.99	216.51
Title V Major Source Thresholds	NA	100	100	100	100	100	100	10	25
PSD Major Source Thresholds	250	250	250	250	250	250	250	--	--
Emission Offset Major Source Thresholds	---	NA	NA	NA	NA	NA	NA	--	--

[1]Under the Part 70 Permit program (40 CFR 70), PM_{10} and $PM_{2.5}$, not particulate matter (PM), are each considered as a "regulated air pollutant."
[2]$PM_{2.5}$ listed is direct $PM_{2.5}$.
[3]Single highest source-wide HAP (Hexane)
*Fugitive HAP emissions are always included in the source-wide emissions.

Appendix A of this TSD reflects the detailed unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(30)) of VOC is equal to or greater than one hundred (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(30)) 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(30)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. The source will be issued a Part 70 Operating Permit Renewal.

Actual Emissions

The following table shows the actual emissions as reported by the source. This information reflects the 2021 OAQ emission data.

Actual Emissions (tons/year)							
PM_{10}	$PM_{2.5}$	SO_2	NO_X	VOC	CO	Lead (Pb)*	Ammonia (NH_3)
0.116	0.116	0.036	6.12	12.50	5.14	-	-

*Lead and lead compounds, including any unique chemical substance that contains lead.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any new control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)								
	PM[1]	PM_{10}[1]	$PM_{2.5}$[1, 2]	SO_2	NO_X	VOC	CO	Single HAP[3]	Total HAPs
Total PTE of Entire Source Excluding Fugitive Emissions*	4.31	6.64	6.64	0.25	40.90	248.97	34.00	48.99	216.51
Title V Major Source Thresholds	NA	100	100	100	100	100	100	10	25
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA
Emission Offset Major Source Thresholds	---	NA	NA	NA	NA	NA	NA	NA	NA

[1] Under the Part 70 Permit program (40 CFR 70), PM_{10} and $PM_{2.5}$, not particulate matter (PM), are each considered as a "regulated air pollutant."
[2] $PM_{2.5}$ listed is direct $PM_{2.5}$.
[3] Single highest source-wide HAP. (Hexane)
*Fugitive HAP emissions are always included in the source-wide emissions.

Appendix A of this TSD reflects the detailed potential to emit of the entire source after issuance.

The source opted to take limit(s) in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to this source. See Technical Support Document (TSD) State Rule Applicability - Entire Source section, 326 IAC 2-8 (FESOP), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset), for more information regarding the limit(s).

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant is emitted at a rate of two hundred fifty (250) tons per year or more and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This source is a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions are equal to or greater than ten (10) tons per year for a single HAP and equal to or greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Federal Rule Applicability

Federal rule applicability for this source has been reviewed as follows:

New Source Performance Standards (NSPS):

(a) The requirements of the New Source Performance Standard for Graphic Arts Industry: Publication Rotogravure Printing, 40 CFR 60, Subpart QQ and 326 IAC 12, are not included in the permit for the rotogravure presses, because Subpart QQ is applicable only to publication rotogravure and does not address packaging rotogravure.

(b) The requirements of the New Source Performance Standard for Pressure Sensitive Tape and Label Surface Coating Operations, 40 CFR 60, Subpart RR and 326 IAC 12, are not included in the permit for this source, because they do not manufacture pressure sensitive tapes and labels.

(c) The requirements of the New Source Performance Standard for Flexible Vinyl and Urethane Coating and Printing, 40 CFR 60, Subpart FFF and 326 IAC 12, are not included in the permit for this source, because they do not perform rotogravure printing on flexible vinyl or urethane products.

(d) The requirements of the New Source Performance Standard for Polymeric Coating of Supporting Substrates Facilities, 40 CFR 60, Subpart VVV and 326 IAC 12, are not included in the permit for this source, because the definition of polymeric coating of supporting substrates excludes supporting webs of paper, plastic film, metallic foil, and metal coil. The source applies coatings to supporting webs of paper, plastic film, and metallic foil, and is thus excluded from the requirements of this Subpart.

(e) The requirements of the New Source Performance Standard for 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 and 326 IAC 12, are not included in the permit for the four (4) solvent storage tanks, because the design capacity for each storage tank is less than seventy-five cubic meters (75 m^3).

(f) The two (2) natural gas boilers, identified as Boiler EU 11 (No. 1) and Boiler EU 12 (No. 2), is subject to the New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc and 326 IAC 12, because each has a heat input capacity greater than 10 MMBtu per hour but less than 100 MMBtu per hour, and they were each constructed after June 9, 1989. The units subject to this rule includes the following:

  (a) One (1) natural gas boiler, identified as Boiler EU 11 (No. 1), constructed in 1997, with a heat input capacity of 20.925 MMBtu/hr, and exhausting to stack 01.

  Under 40 CFR 60, Subpart Dc, this unit is considered an affected facility.
  Under 40 CFR 63, Subpart DDDDD, this unit is considered an affected facility.

  (b) One (1) natural gas boiler, identified as Boiler EU 12 (No. 2), constructed in 1998, with a heat input capacity of 20.925 MMBtu/hr, and exhausting to stack 02.

  Under 40 CFR 60, Subpart Dc, this unit is considered an affected facility.
  Under 40 CFR 63, Subpart DDDDD, this unit is considered an affected facility.

The two (2) natural gas boilers, identified as Boiler EU 11 (No. 1) and Boiler EU 12 (No. 2), are subject to the following portions of Subpart Dc.

  (1) 40 CFR 60.48 (c)

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the two (2) natural gas boilers, identified as Boiler EU 11 (No.1) and Boiler EU 12 (No.2), except as otherwise specified in 40 CFR 60, Subpart Dc.

(g) There are no other New Source Performance Standards (40 CFR Part 60) and 326 IAC 12 included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP):

(a) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Printing, Coating, and Dyeing of Fabrics and Other Textiles, 40 CFR 63, Subpart OOOO and 326 IAC 20-77, are not included in the permit for this source, since the source does not print or coat fabric or other textiles.

(b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Pulp and Paper Industry, 40 CFR 63, Subpart S and 326 IAC 20-33, are not included in the permit for this source, since they do not produce pulp, paper, or paperboard.

(c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Halogenated Solvent Cleaning, 40 CFR 63, Subpart T and 326 IAC 20-6, are not included in the permit for the two (2) cold cleaner degreasers, identified as EU102 and EU105, since the solvents used in the two (2) cold cleaner degreasers are not halogenated.

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers,40 CFR 63, Subpart JJJJJJ, are not included in the permit for the two (2) natural gas boilers, identified as Boiler EU 11 (No. 1) and Boiler EU 12 (No. 2), since each unit is a gas fired boiler, as defined by 40 CFR 63.11237, which is specifically exempted from this rule under 40 CFR 63.11195(e).

(e) This source is subject to the National Emission Standards for Hazardous Air Pollutants for Printing and Publishing Industry, 40 CFR 63, Subpart KK, which is incorporated by reference as 326 IAC 20-18, because the source is major source of hazardous air pollutants (HAP) and the source operates publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses. The units subject to this rule include the following:

(a) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 101 (6RL), constructed in 1987, having a maximum line speed of 1000 ft/min and a maximum printing width of 52 inches, using thermal oxidizer 6RL as control, using natural gas, with a heat input rate of 24.0 MMBtu/hr, and exhausting to stack S11. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.

(b) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 103 (8RL), constructed in 1995, having a maximum line speed of 1000 ft/min and a maximum printing width of 51.5 inches, using thermal oxidizer Megtec as control, using natural gas, with a heat input rate of 8.7 MMBtu/hr, and exhausting to stack 13. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.

(c) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 104 (R17), approved in 2022 for construction, having a maximum line speed of 1312 ft/min and a maximum printing width of 52 inches, using thermal oxidizer Megtec as control, with a heat input rate of 8.7 MMBtu/hr, and exhausting to stack S13. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.

These emission units are subject to the following portions of Subpart KK:

(1) 40 CFR 63.820 (a)(1)
(2) 40 CFR 63.821 (a)(2)
(3) 40 CFR 63.822
(4) 40 CFR 63.823
(5) 40 CFR 63.825 (a), (b)(7), (d), and (h)
(6) 40 CFR 63.826
(7) 40 CFR 63.827
(8) 40 CFR 63.828
(9) 40 CFR 63.829
(10) Table 1 of Subpart KK

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the three (3) rotogravure printing presses, identified as EU 101 (6RL), EU 103 (8RL), and EU 104 (R17), except as otherwise specified in 40 CFR 63, Subpart KK.

(f) The two (2) natural gas boilers, identified as Boiler EU 11 (No.1) and EU 12 (No. 2), are subject to the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD, which is incorporated by reference as 326 IAC 20-95, because the source operates an industrial, commercial, or institutional boiler or process heater, as defined in 40 CFR 63.7575, and is located at a major source of HAPs. The units subject to this rule include the following:

(a) One (1) natural gas boiler, identified as Boiler EU 11 (No. 1), constructed in 1997, with a heat input capacity of 20.925 MMBtu/hr, and exhausting to stack 01.

Under 40 CFR 60, Subpart Dc, this unit is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this unit is considered an affected facility.

(b) One (1) natural gas boiler, identified as Boiler EU 12 (No. 2), constructed in 1998, with a heat input capacity of 20.925 MMBtu/hr, and exhausting to stack 02.

Under 40 CFR 60, Subpart Dc, this unit is considered an affected facility.
Under 40 CFR 63, Subpart DDDDD, this unit is considered an affected facility.

These emission units are subject to the following portions of Subpart DDDDD:

(1) 40 CFR 63.7480
(2) 40 CFR 63.7485
(3) 40 CFR 63.7490 (a)(1) and (d)
(4) 40 CFR 63.7491 (d)
(5) 40 CFR 63.7495 (b)
(6) 40 CFR 63.7499 (l)
(7) 40 CFR 63.7500 (a)(1)
(8) 40 CFR 63.7505 (a)
(9) 40 CFR 63.7545 (b), (e)(1) and (8)
(10) 40 CFR 63.7550 (b)
(11) 40 CFR 63.7555 (a)(1)
(12) 40 CFR 63.7565
(13) 40 CFR 63.7570
(14) 40 CFR 63.7575
(15) Table 3 to Subpart DDDDD

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the two (2) natural gas boilers, identified as Boiler EU 11 (No.1) and EU 12 (No. 2), except as otherwise specified in 40 CFR 63, Subpart DDDDD.

(g) The one (1) 25L laminator, identified as EU 205, one (1) 11-station rotogravure printing press, identified as EU 103 (8RL), and one (1) 5X extrusion coater/laminator, identified as EU 201 is subject to the National Emission Standards for Hazardous Air Pollutants for Paper and Other Web Coating, 40 CFR 63, Subpart JJJJ, which is incorporated by reference as 326 IAC 20-65., because the source is a major source of hazardous air pollutants (HAPs) and operates web coating lines. The units subject to this rule include the following:

(a) One (1) 5X extrusion coater/laminator, identified as EU 201, installed in 1987, product being coated is web substrate packaging material, application method used is roll coating, exhausting to stack 21. EU 201 consists of the following units:

(1) One (1) extrusion laminator;

(2) One (1) coating/adhesive lamination deck;

(3) One (1) coating deck; and

(4) Two (2) coating station dryers.

Under 40 CFR 63, Subpart JJJJ, these units are considered affected facilities.

(b) One (1) 11-station rotogravure printing press with adhesive coating/lamination station, identified as EU 103 (8RL), constructed in 1995, having a maximum line speed of 1000 ft/min and a maximum printing width of 51.5 inches, using thermal oxidizer Megtec as control, using natural gas, with a heat input rate of 8.7 MMBtu/hr, and exhausting to stack 13. Equipped with adhesive applicator and enclosed in a permanent total enclosure.

Under 40 CFR 63, Subpart KK, this unit is considered an affected facility.
Under 40 CFR 63, Subpart JJJJ, this unit is considered an affected facility.

(c) One (1) 25L laminator, identified as EU 205, approved in 2022 for construction, using Megtec thermal oxidizer as control when using solvent borne coatings, with a heat input rate of 8.7 MMBtu/hr, and exhausting to stack S13. When coating using water-based coatings, the thermal oxidizer will not be operated, and emissions will be exhausted through stack 14. Product being coated is web substrate packaging material, application method used is roll coating, and consisting of the following units:

(1) Two (2) extrusion laminators;

(2) Two (2) coating/adhesive lamination stations, identified as No. 1 and No. 2, each utilizing a gravure cylinder application system, each with a permanent enclosure capture system, each coating a maximum of 43.1 million (MM) square inches per hour; and

(3) One (1) 8.0 MMBtu/hr hot oil system.

Under 40 CFR 63, Subpart JJJJ, these units are considered affected facilities.

These emission units are subject to the following portions of Subpart JJJJ:

(1) 40 CFR 63.3280
(2) 40 CFR 63.3290
(3) 40 CFR 63.3300
(4) 40 CFR 63.3310
(5) 40 CFR 63.3320
(6) 40 CFR 63.3321
(7) 40 CFR 63.3330
(8) 40 CFR 63.3340
(9) 40 CFR 63.3350
(10) 40 CFR 63.3360
(11) 40 CFR 63.3370
(12) 40 CFR 63.3400
(13) 40 CFR 63.3410
(14) Table 1 of Subpart JJJJ - Applicable portions only
(15) Table 2 of Subpart JJJJ

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the one (1) 25L laminator, identified as EU 205, one (1) 11-station rotogravure printing press, identified as EU 103 (8RL), and one (1) 5X extrusion coater/laminator, identified as EU 201, except as otherwise specified in 40 CFR 63, Subpart JJJJ.

(h) There are no other National Emission Standards for Hazardous Air Pollutants under 40 CFR 63, 326 IAC 14 and 326 IAC 20 included in the permit.

Compliance Assurance Monitoring (CAM):

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the regulated pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant (or a surrogate thereof); and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

(b) Pursuant to 40 CFR 64.2(b)(1)(i), emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act are exempt from the requirements of CAM. Therefore, an evaluation was not conducted for any emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act.

The following table is used to identify the applicability of CAM to each emission unit and each emission limitation or standard for a specified pollutant based on the criteria specified under 40 CFR 64.2:

Emission Unit/Pollutant	Control Device	Applicable Emission Limitation	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
EU 101 6RL Printing Press - VOC	RTO	326 IAC 2-2 326 IAC 8-5-5	>100	<100	Y	N
EU 103 8RL Printing Press - VOC		326 IAC 2-2 326 IAC 8-5-5	>100	<100	Y	N
EU 104 Printing Press- VOC		326 IAC 2-2 326 IAC 8-5-5	>100	<100	Y	N
EU 201 Extrusion Coater/Laminator- VOC		326 IAC 2-2 326 IAC 8-5-5	>100	<100	Y	N
EU 204 Extrusion Coater/Laminator- VOC		326 IAC 2-2 326 IAC 8-5-5	>100	<100	Y	N
EU205 Extrusion Coater/Laminator- VOC		326 IAC 2-2 326 IAC 8-5-5	>100	<100	Y	N
EU 102 Cold Cleaner - VOC		326 IAC 2-2 326 IAC 8-5-5	<100	<100	N[1]	N
EU 105 Cold Cleaner - VOC		326 IAC 2-2 326 IAC 8-5-5	<100	<100	N[1]	N

Under the Part 70 Permit program (40 CFR 70), PM is not a regulated air pollutant.

Uncontrolled PTE (tpy) and controlled PTE (tpy) are evaluated against the Major Source Threshold for each pollutant. Major Source Threshold for regulated air pollutants (PM10, PM2.5, SO2, NOx, VOC and CO) is 100 tpy, for a single HAP ten (10) tpy, and for total HAPs twenty-five (25) tpy.

PM* For limitations under 326 IAC 6-3-2, 326 IAC 6.5, and 326 IAC 6.8, IDEM OAQ uses PM as a surrogate for the regulated air pollutant PM10. Therefore, uncontrolled PTE and controlled PTE reflect the emissions of the regulated air pollutant PM10.

N[1] CAM does not apply for VOC because the uncontrolled PTE of VOC is less than the major source threshold.

Emission Unit/Pollutant	Control Device	Applicable Emission Limitation	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Controls: BH = Baghouse, C = Cyclone, DC = Dust Collection System, RTO = Regenerative or Recuperative Thermal Oxidizer, WS = Wet Scrubber, ESP = Electrostatic Precipitator						
Emission units without air pollution controls are not subject to CAM. Therefore, they are not listed.						

Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are applicable to EU 14 Printing Press and EU205 Laminator for PM. A CAM plan was submitted as part of a previous permit application and the Compliance Determination and Monitoring Requirements section includes a detailed description of the CAM requirements.

State Rule Applicability - Entire Source

State rule applicability for this source has been reviewed as follows:

326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)
PSD and Emission Offset applicability is discussed under the Potential to Emit After Issuance section of this document.

PSD Minor Source Limits

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the following:

(a) In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the total VOC emissions from rotogravure printing presses EU 101 (6RL), EU 103 (8RL), EU 104 (R17), 5X extrusion coater/laminator EU 201, 6X extrusion coater/laminator EU 204, 25L laminator EU 205, cold cleaner degreasing units EU 102 and EU 105, Inkjet Printer and QR Printer shall not exceed 246.3 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

PSD BACT Limits

1988 Modification

Pursuant to 326 IAC 2-2-3 (PSD BACT), CP (41) 1704, issued on September 22, 1988, and revised by SSM081-23492-00005, issued on August 28, 2007:

(a) The VOC emissions from rotogravure printing press EU 101 (6RL) shall be controlled by a combination of a permanent total enclosure, with a capture efficiency of 100%, and a thermal oxidizer.

(b) The overall VOC control efficiency for the thermal oxidizer controlling the emissions from rotogravure printing press EU 101 (6RL) (including the capture efficiency and destruction efficiency) shall be at least 97.5%.

(c) The total amount of VOC delivered to rotogravure printing press EU 101 (6RL) shall be limited to less than 6,738 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

<u>1988 and 2019 Modification</u>
Pursuant to 326 IAC 2-2-3 (PSD BACT), CP (41) 1704, issued on September 22, 1988, and revised by SSM 081-41457-00005, issued on July 11, 2019:

(a) The VOC emissions from the EU 102 cold cleaner degreasing unit shall be controlled by an RTO.

(b) The overall control efficiency, including the capture and destruction efficiency, shall be at least 98%.

(c) The VOC input to the EU 102 cold cleaner degreasing unit shall not exceed 16.43 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The provisions of 326 IAC 2-4.1 apply to any owner or operator who constructs or reconstructs a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.41, after July 27, 1997, unless the major source has been specifically regulated under or exempted from regulation under a NESHAP that was issued pursuant to Section 112(d), 112(h), or 112(j) of the Clean Air Act (CAA) and incorporated under 40 CFR 63. On and after June 29, 1998, 326 IAC 2-4.1 is intended to implement the requirements of Section 112(g)(2)(B) of the Clean Air Act (CAA).

The operation of the EU 103 (8RL) printing press, EU 104 (R17) printing press and 25L laminator EU 205 will emit equal to or greater than ten (10) tons per year for a single HAP and equal to or greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 would apply to EU 103 (8RL) printing press, EU 104 (R17) printing press and 25L laminator EU 205. However, pursuant to 326 IAC 2-4.1-1(b)(2), because the EU 103 (8RL) printing press, EU 104 (R17) printing press and 25L laminator EU 205 are specifically regulated under NESHAP 40 CFR 63, Subparts KK and JJJJ respectively, which was issued pursuant to Section 112(d), 112(h), or 112(j) of the CAA, EU 103 (8RL) printing press, EU 104 (R17) printing press and 25L laminator EU 205 are exempt from the requirements of 326 IAC 2-4.1.

326 IAC 2-6 (Emission Reporting)
This source is subject to the requirements of 326 IAC 2-6 (Emission Reporting), since it is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program. Pursuant to 326 IAC 2-6-3(a)(2), the Permittee shall submit triennially, by July 1, an emission statement covering the previous calendar year in accordance with the compliance schedule in 326 IAC 2-6-3. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 2-7-6(5) (Annual Compliance Certification)
The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certifications that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

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

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This source is not subject to the requirements of 326 IAC 6-5, because the source has potential fugitive particulate emissions of less than twenty-five (25) tons per year.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-1(a), this source (located in Johnson County) is not subject to the requirements of 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

326 IAC 6.8 (Particulate Matter Limitations for Lake County)
Pursuant to 326 IAC 6.8-1-1(a), this source (located in Johnson County) is not subject to the requirements of 326 IAC 6.8 because it is not located in Lake County.

326 IAC 6.8 (Lake County: Fugitive Particulate Matter)
Pursuant to 326 IAC 6.8-10-1, this source (located in Johnson County) is not subject to the requirements of 326 IAC 6.8-10 because it is not located in Lake County.

State Rule Applicability – Individual Facilities

State rule applicability has been reviewed as follows:

Rotogravure Printing Presses (EU 101, EU 103, and EU 104)

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The three rotogravure printing presses, identified as EU 101, EU 103, and EU 104, are not subject to the requirements of 326 IAC 8-1-6 because they are regulated by other rules in 326 IAC 8. The three rotogravure printing presses, identified as EU 101, EU 103, and EU 104, are subject to the requirements of 326 IAC 8-5-5 (Graphic Arts Operations).

326 IAC 8-1-12 (Compliance Certification, Record Keeping and Reporting Requirements for Certain Coating Facilities Using Control Devices)
Pursuant to 326 IAC 8-1-12(a), this rule applies to any source that uses a control device to comply with a VOC emission limit, and which also meets the applicability of criteria of 326 IAC 8-5-5(a)(1), (a)(2), or (a)(3) for Graphics Arts Operations. The rotogravure printing presses, identified as EU 101 (6RL), EU 103 (8RL), and EU 104 (R17), meet the applicability criteria of 326 IAC 8-5-5(a)(2). The source also proposes to use control devices to meet the requirements of 326 IAC 8-5-5 when applying solvent based materials, therefore, the requirements of 326 IAC 8-1-12 apply to this source when operating the VOC control device.

326 IAC 8-2-5 (Paper Coating Operations)
The three rotogravure printing presses, identified as EU 101, EU 103, and EU 104, are not subject to the requirements of 326 IAC 8-2-5 since these units are rotogravure printing presses subject to the requirements of 326 IAC 8-5-5 (Graphic Arts Operations). Pursuant to 326 IAC 8-2-5(a), single pieces of equipment that meet the emission limitations contained in 326 IAC 8-5-5 that conduct packaging rotogravure printing, publication rotogravure printing, or flexographic printing operations in line with surface coating lines are exempt from this category.

326 IAC 8-5-5 (Graphic Arts Operations)
The rotogravure presses, identified as EU 101 (6RL) and EU 103 (8RL), are subject to 326 IAC 8-5-5, because they are new packaging rotogravure presses constructed after November 1, 1980 with potential emissions of VOC greater than twenty five (25) tons per year.

(a) Pursuant to 326 IAC 8-5-5(c), the Permittee shall not cause, allow, or permit the operation of the rotogravure presses, identified as EU 101 (6RL) and EU 103 (8RL) unless:

(1) the volatile fraction of the ink, as it is applied to the substrate, contains twenty-five percent (25%) by volume or less of volatile organic compound and seventy-five percent (75%) by volume or more of water;

(2) the ink as it is applied to the substrate, less water, contains sixty percent (60%) by volume or more nonvolatile material;

(3) for packaging rotogravure and flexographic printing processes, the ink, as applied to the substrate, meets an emission limit of five-tenths (0.5) pound of volatile organic compound per pound of solids in the ink.

(b) Pursuant to 326 IAC 8-5-5(c)(3)(B), the Megtec thermal oxidizer the 6RL and 8RL thermal oxidizers shall be installed and operated to maintain at least a 90% destruction efficiency.

The rotogravure press EU 101 (6RL) was constructed before July 1, 1990, and, therefore, is not subject to the requirements of 326 IAC 8-5-5(e).

The rotogravure press EU 103 (8RL) is subject to the requirements of 326 IAC 8-5-5(e), because it is a new flexible packaging printing press constructed after July 1, 1990 and has a potiential to emit VOC of 25 tons or more.

The rotogravure press EU 104 (R17) is subject to the requirements of 326 IAC 8-5-5(e), because it is a new flexible packaging printing press constructed after July 1, 1990 and has a potiential to emit VOC of 25 tons or more.

(c) Pursuant to 326 IAC 8-5-5(e)(2)(C), the combination of the capture system and emission control device for the rotogravure presses EU 103 (8RL) and EU 104 (R17), shall maintain an overall control efficiency of 75%.

(d) Pursuant to 326 IAC 8-5-5(f), work practices shall be used to minimize VOC emissions from cleaning operations. Work practices shall include, but not be limited to, the following:

(1) When not in use, all cleaning materials shall be kept in closed containers.

(2) Cleaning materials shall be conveyed from one (1) location to another in closed containers or pipes.

5x and 6x Coater/Laminators (EU 201, EU 204, and EU 205)

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)

(a) The requirements of 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) do not apply to the extrusion coater/laminator, identified EU 201 (5X), because the source has limited VOC emissions to less than 25 tons per year pursuant to the registration issued to the source on June 15, 1987.

(b) The requirements of 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) do not apply to the extrusion coater/laminator, identified EU 204 (6X), because it is subject to the requirements of 326 IAC 8-2-5 (Paper Coating Operations), and pursuant to 326 IAC 8-1-6(3)(A), the requirements of 326 IAC 8-1-6 are not applicable to facilities regulated by other 326 IAC 8 rules.

(c) The EU 205 laminator is not subject to the requirements of 326 IAC 8-1-6 because it is regulated by other rules in 326 IAC 8. The laminator is subject to the requirements of 326 IAC 8-2-5 (Paper Coating Operations).

326 IAC 8-2-5 (Paper Coating Operations)

(a) The 5X extrusion coater/laminator, identified as EU 201, constructed before 1987, is not subject to 326 IAC 8-2-5, because the VOC input has been limited to less than twenty-five (25) tons per year pursuant to the registration issued to the source on June 15, 1987. Compliance with this limit shall render the requirements of 326 IAC 8-2-5 (Paper Coating Operations) not applicable to the 5X extrusion coater/laminator EU 201.

(b) The 6X extrusion coater/laminator, identified as EU 204, is subject to 326 IAC 8-2-5, because it is a web coating process of paper, plastic, and metal foil, installed after July 1, 1990, and it has actual emissions of greater than fifteen (15) pounds of VOC per day before add-on controls. Pursuant to 326 IAC 8-2-5, Sonoco Flexible Packaging shall not cause, allow, or permit the discharge into the atmosphere of any VOC in excess of 2.9 pounds of VOC per gallon of coating excluding water, delivered to the coating applicator from a paper, plastic, metal foil, or pressure sensitive tape/labels coating line.

(c) The 25L laminator, identified as EU 205, is subject to 326 IAC 8-2-5, because it is a web coating process of paper, plastic, and metal foil, installed after July 1, 1990, and it has actual emissions of greater than fifteen (15) pounds of VOC per day before add-on controls. Pursuant to 326 IAC 8-2-5, Sonoco Flexible Packaging shall not cause, allow, or permit the discharge into the atmosphere of any VOC in excess of 2.9 pounds of VOC per gallon of coating excluding water, delivered to the coating applicator from a paper, plastic, metal foil, or pressure sensitive tape/labels coating line.

To achieve compliance with the requirements of 326 IAC 8-2-5, pursuant to 326 IAC 8-1-2(2), the coating station, identified as EU 204, shall be controlled by the existing permitted 24.0 MMBtu per hour thermal oxidizer, identified as 8RL, and the coating station, identified as EU 205, shall be controlled by the existing permitted 8.7 MMBtu/hr thermal oxidizer, identified as "Megtec", when coatings are applied which have a VOC content in excess of 2.9 pounds VOC per gallon of coating less water, and operating at a temperature and duct velocity determined in the compliance tests to maintain a minimum 97.5% destruction efficiency and a minimum capture efficiency of 80.2%.

The following conditions apply to the 6X extrusion coater/laminator, identified as EU 204, and the 8RL thermal oxidizer when non-compliant coatings are being used:

(1) Pursuant to 326 IAC 8-1-2 (b), the VOC emissions from the 6X extrusion coater/laminator (EU 204) shall be limited to no greater than the equivalent emissions (E), expressed as pounds of VOC per gallon of coating solids.

This equivalency was determined by the following equation:

$E = L / (1 - (L/D))$

Where:

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating;
D= Density of VOC in coating in pounds per gallon of VOC;
E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

A solvent density of 7.36 pounds of VOC per gallon of coating shall be used to determine equivalent pounds of VOC per gallon of solids for the applicable emission limit contained in this article.

Actual solvent density shall be used to determine compliance using the compliance methods in 326 IAC 8-1-2 (a).

$E = 2.9/(1-(2.9/7.36))$
E = 4.75 pounds per gallon of solid

The pounds of VOC per gallon of coating solids shall be limited to less than 4.75 pounds per gallon of solid.

(2) Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the extrusion coater/laminator identified as EU 204 (6X) and the 8RL thermal oxidizer shall be no less than the equivalent overall efficiency was calculated by the following equation:

$$O = \frac{(V - E)}{V} \times 100$$

Where: V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied
E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied
O = Equivalent overall efficiency of the capture system and control device as a percentage

O = [(24 - 4.75)/24] x 100% = 80.2%

The overall efficiency of the 8RL thermal oxidizer shall be greater than 80.2%.

The following conditions apply to the 25L laminator, identified as EU 205, and the Megtec thermal oxidizer when non-compliant coatings are being used:

(1) Pursuant to 326 IAC 8-1-2 (b), the VOC emissions from the 25L laminator (EU 205) shall be limited to no greater than the equivalent emissions (E), expressed as pounds of VOC per gallon of coating solids.

This equivalency was determined by the following equation:

E = L / (1 - (L/D))

Where:

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating;
D= Density of VOC in coating in pounds per gallon of VOC;
E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

A solvent density of 7.36 pounds of VOC per gallon of coating shall be used to determine equivalent pounds of VOC per gallon of solids for the applicable emission limit contained in this article.

Actual solvent density shall be used to determine compliance using the compliance methods in 326 IAC 8-1-2 (a).

E = 2.9/(1-(2.9/7.36))

E = 4.75 pounds per gallon of solid

The pounds of VOC per gallon of coating solids shall be limited to less than 4.75 pounds per gallon of solid.

(2) Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the extrusion coater/laminator, identified as EU 205 (25L), and the Megtec thermal oxidizer shall be no less than the equivalent overall efficiency was calculated by the following equation:

$$O = \frac{(V - E)}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied

O = Equivalent overall efficiency of the capture system and control device as a percentage

O = [(9.43 - 4.75)/9.43] x 100% = 49.63%

The overall efficiency of the Megtec thermal oxidizer shall be greater than 49.63%.

Cold Cleaning Degreaser Units (EU 102 and EU 105)

326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements)
Pursuant to 326 IAC 8-3-1(c)(1)(B), the requirements of 326 IAC 8-3-2(a) apply to the cold cleaning degreasers, identified as EU 102 and EU 105, because the cold cleaning degreasers were constructed after January 1, 1980, located anywhere in the state, and have potential VOC emissions.

326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers)
Pursuant to 326 IAC 8-3-1(c)(3)(A) and (B), the cold cleaning degreasers, identified as EU 102 and EU 105, are subject to the material requirements and recordkeeping requirements of 326 IAC 8-3-8.

326 IAC 8-6 (Organic Solvent Emission Limitations)
This source was not constructed between October 7, 1974, and January 1, 1980, and is not located in Lake or Marion Counties. Therefore, the requirements of 326 IAC 8-6 do not apply to this source.

Natural Gas Boilers (EU 11 (No.1) and EU 12 (No.2))

326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-1(d), indirect heating facilities which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4.

The particulate matter emissions (Pt) shall be limited by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).

Q = Total source maximum operating capacity rating in MMBtu/hr heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

Indirect Heating Units Which Began Operation After September 21, 1983						
Facility	Construction Date (Removal Date)	Operating Capacity (MMBtu/hr)	Q (MMBtu/hr)	Calculated Pt (lb/MMBtu)	Particulate Limitation, (Pt) (lb/MMBtu)	PM PTE based on AP-42 (lb/MMBtu)
Boiler (EU 11)	1997	20.925	20.925	0.49	0.49	0.002
Boiler (EU 12)	1998	20.925	41.85	0.41	0.41	0.002
Hot Oil Heating System (25 L Laminator)	2023	8.0	49.85	0.39	0.39	0.002
Where: Q = Includes the capacity (MMBtu/hr) of the new unit(s) and the capacities for those unit(s) which were in operation at the source at the time the new unit(s) was constructed. Note: Emission units shown in strikethrough were subsequently removed from the source. The effect of removing these units on "Q" is shown in the year the boiler was removed.						

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(1), the boilers, identified as EU 11 and EU 12, are not subject to the requirements of 326 IAC 6-3, since they are combustion for indirect heating units.

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
These emission units are not subject to 326 IAC 326 IAC 7-1.1 because they have a potential to emit (or limited potential to emit) sulfur dioxide (SO2) of less than 25 tons per year or 10 pounds per hour.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Even though, the boilers, identified as EU 11 and EU 12, were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

326 IAC 9-1 (Carbon Monoxide Emission Limits)
The requirements of 326 IAC 9-1 do not apply to the boilers, identified as EU 11 and EU 12, because this source does not operate a catalyst regeneration petroleum cracking system or a petroleum fluid coker, grey iron cupola, blast furnace, basic oxygen steel furnace, or other ferrous metal smelting equipment.

326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)
The requirements of 326 IAC 10-3 do not apply to the boilers, identified as EU 11 and EU 12, since these units are not a blast furnace gas-fired boiler, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2).

Printers (Inkjet Printer and QR Printer)

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Even though, the printers, identified as Inkjet Printer and QR Printer, were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

326 IAC 8-2-5 (Paper Coating Operations)
Pursuant 326 IAC 8-2-1(a)(4) the one (1) Inkjet Printer and one (1) QR Printer are not subject to the requirements of 326 IAC 8-2-5, since the potential VOC emissions from each printer are less than fifteen (15) pounds of VOC per day before add-on controls.

326 IAC 8-5-5 (Graphic arts operations)
Pursuant 326 IAC 8-5-5(a) one (1) Inkjet Printer and one (1) QR Printer are not subject to the requirements of 326 IAC 8-5-5, because these units do not perform packaging rotogravure, publications rotogravure, or flexographic printing. Therefore, 326 IAC 8-5-5 does not apply to these units.

Natural Gas-fired Heaters

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the natural gas heater for 5X and 6X extrusion coater/laminators are not subject to the requirements of 326 IAC 6-3, since they are a manufacturing process with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
These emission units are not subject to 326 IAC 326 IAC 7-1.1 because each has a potential to emit (or limited potential to emit) sulfur dioxide (SO2) of less than 25 tons per year or 10 pounds per hour.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Even though, these units were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

326 IAC 9-1 (Carbon Monoxide Emission Limits)
The requirements of 326 IAC 9-1 do not apply to the natural gas-fired heaters, because this source does not operate a catalyst regeneration petroleum cracking system or a petroleum fluid coker, grey iron cupola, blast furnace, basic oxygen steel furnace, or other ferrous metal smelting equipment.

326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)
The requirements of 326 IAC 10-3 do not apply to the natural gas-fired heaters, since these units are not a blast furnace gas-fired boiler, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2).

Natural Gas-fired Hot Oil System

326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-1(d), indirect heating facilities which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4.

The particulate matter emissions (Pt) shall be limited by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).

Q = Total source maximum operating capacity rating in MMBtu/hr heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility’s permit application, except when some lower capacity is contained in the facility’s operation permit; in which case, the capacity specified in the operation permit shall be used.

Indirect Heating Units Which Began Operation After September 21, 1983						
Facility	Construction Date (Removal Date)	Operating Capacity (MMBtu/hr)	Q (MMBtu/hr)	Calculated Pt (lb/MMBtu)	Particulate Limitation, (Pt) (lb/MMBtu)	PM PTE based on AP-42 (lb/MMBtu)
Boiler (EU 11)	1997	20.925	20.925	0.49	0.49	0.002
Boiler (EU 12)	1998	20.925	41.85	0.41	0.41	0.002
Hot Oil Heating System (25 L Laminator)	2023	8.0	49.85	0.39	0.39	0.002
Where: Q = Includes the capacity (MMBtu/hr) of the new unit(s) and the capacities for those unit(s) which were in operation at the source at the time the new unit(s) was constructed. Note: Emission units shown in strikethrough were subsequently removed from the source. The effect of removing these units on "Q" is shown in the year the boiler was removed.						

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the hot oil system for the 25L laminator is not subject to the requirements of 326 IAC 6-3, since it is a manufacturing process with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
This emission unit is not subject to 326 IAC 326 IAC 7-1.1 because it has a potential to emit (or limited potential to emit) sulfur dioxide (SO2) of less than 25 tons per year or 10 pounds per hour.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Even though, this unit was constructed after January 1, 1980, it is not subject to the requirements of 326 IAC 8-1-6 because its unlimited VOC potential emissions are less than twenty-five (25) tons per year.

Welding and Torch Cutting

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(9) and (10), the welding and torch cutting are not subject to the requirements of 326 IAC 6-3, since the welding operation consumes less than six hundred twenty-five (625) pounds of rod or wire per day, and the torch cutting operation cuts less than three thousand four hundred (3,400) inches per hour of stock one (1) inch thickness or less.

Loading and Conveying Activities

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the loading and conveying activities are not subject to the requirements of 326 IAC 6-3, since they are a manufacturing process with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

Storage Tanks

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Even though, the storage tanks were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because their unlimited VOC potential emissions are less than twenty-five (25) tons per year.

326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties)
The requirements of 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties) are not included in this permit for the storage tanks because the source is not located in Clark, Floyd, Lake, or Porter County.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
The requirements of 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels) are not included in this permit for the storage tanks because the source is not located in Clark, Floyd, Lake, or Porter County.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to assure 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.

(a) The Compliance Determination Requirements applicable to this source are as follows:

Testing Requirements:

Summary of Testing Requirements

Emission Unit	Control Device	Timeframe for Testing or Date of Initial Valid Demonstration)	Pollutant/ Parameter	Frequency of Testing	Authority
6X coater/laminator (EU 204) and degreasing units (EU 102 and 105)	6X RTO	Not later than 180 days after startup of 6X RTO	VOC	Every 2.5 years	326 IAC 2-2 326 IAC 8-2-5
EU 103, EU 104 and 25L coater/laminator (EU 205)	Megtec RTO	Not later than 180 days after startup of EU 104 (R17)	VOC	Every 2.5 years	326 IAC 2-2 326 IAC 8-2-5 326 IAC 8-5-5

(b) The Compliance Monitoring Requirements applicable to this source are as follows:

Control Device	Type of Parametric Monitoring	Frequency	Range or Specification
Megtec RTO	3-hour average oxidizer temperature monitoring	Continuous	At or above 1,400 °F from startup (or permit issuance) until stack test results are available, then at or above the value established in the most recent compliant stack test.
	Duct pressure or fan amperage monitoring	Daily	Within normal range from startup (or permit issuance) until stack test results are available, then within the normal range established in the most recent compliant stack test
6X RTO	3-hour average oxidizer temperature monitoring	Continuous	At or above 1,400 °F from startup (or permit issuance) until stack test results are available, then at or above the value established in the most recent compliant stack test.
	Duct pressure or fan amperage monitoring	Daily	Within normal range from startup (or permit issuance) until stack test results are available, then within the normal range established in the most recent compliant stack test
*Note: Compliance monitoring parameter value(s) or specification(s) from the most recent compliant stack test will be specified in the stack test report available via IDEM's Virtual File Cabinet (VFC). To access VFC, please go to: https://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.			

These monitoring conditions are necessary because the Megtec RTO for the printing presses EU 103, EU 104 and Laminator EU 205 must operate properly to assure compliance with 326 IAC 2-2 (PSD), 326 IAC 8-5-5 (Graphic Arts Operations) and 326 IAC 8-2-5 (Paper Coating Operations).

These monitoring conditions are necessary because the 6X RTO for the laminator EU 204 and cold cleaning degreasing units (EU 102 and EU 105) must operate properly to assure compliance with 326 IAC 2-2 (PSD) and 326 IAC 8-2-5 (Paper Coating Operations).

Proposed Changes

As part of this permit approval, the permit may contain new or different permit conditions and some conditions from previously issued permits/approvals may have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes.

The following changes were made to conditions contained previously issued permits/approvals (these changes may include Title I changes):

(1) The last permit modification permitted a reconfiguration of Sonoco control devices which installed a new control device, 6X thermal oxidizer, and then reconfigured the existing control devices, renamed as Megtec. The new oxidizer has been installed and the existing equipment has been

reconfigured to the Megtec oxidizer. The 'Before Modification' equipment description has been changed to reflect the 'After Modification' description in the sections of A.2, Section D.1, Section E.3 and Section E.4 of the permit as follows:

(2) Section A.3 of the permit has been changed to show the removal of one (1) N-propyl alcohol storage tank and the addition of one (1) 50% N-Propyl Acetate/50% N-Propyl Alcohol storage tank as follows:

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

***

(h) Activities with potential uncontrolled emissions equal to or less than the thresholds below:

CO ≤ 25 lb/day	Pb ≤ 0.6 tpy or 3.29 lb/day	NO_X ≤ 5 lb/hr or 25 lb/day
PM_{10} ≤ 5 lb/hr or 25 lb/day	SO_2 ≤ 5 lb/hr or 25 lb/day	VOC ≤ 3 lb/hr or 15 lb/day

(1) ~~Two~~**One** (~~2~~**1**) N-propyl alcohol storage tank;

(2) One (1) ethyl alcohol storage tank;

(3) One (1) N-propyl acetate storage tank;

(4) One (1) ethyl acetate storage tank; and

(5) One (1) 50% N-Propyl Acetate/50% N-Propyl Alcohol storage tank.

***

(3) Section D.0 of the permit has been removed as it relates to the 'Before Modification' description of the units from the last permit modification.

(4) The PSD minor limit in Condition D.1.1 has been updated as follows:

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

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the total VOC emissions from rotogravure printing presses EU 101 (6RL), EU 103 (8RL), EU 104 (~~10RL~~**R17**), 5X extrusion coater/laminator EU 201, 6X extrusion coater/laminator EU 204, 25L laminator EU 205, cold cleaner degreasing units EU 102 and EU 105, Inkjet Printer and QR Printer shall not exceed 246.3 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on October 30, 2023.

The operation of this stationary commercial printing operation shall be subject to the conditions of the attached proposed Part 70 Operating Permit Renewal No. 081-47176-00005.

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal be approved.

IDEM Contact

(a) If you have any questions regarding this permit, please contact Kristen Squillace, 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) 233-9327 or (800) 451-6027, and ask for Kristen Squillace or (317) 233-9327.

(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 Air Permits page on the Internet at: https://www.in.gov/idem/airpermit/public-participation/; and the Citizens' Guide to IDEM on the Internet at: https://www.in.gov/idem/resources/citizens-guide-to-idem/.

Appendix A: Emission Calculations
Potential to Emit Summary

Company Name: Sonoco Flexible Packaging, Inc
Address City IN Zip: 6502 South US Highway 31, Edinburgh, Indiana 46124
Permit Number: T081-47176-00005
Permit Reviewer: Kristen Squillace

Uncontrolled Potential to Emit (tons/year)

Emission Unit	PM	PM_{10}	$PM_{2.5}$*	SO_2	NO_x	VOC	CO
EU 101 6RL Printing Press	-	-	-	-	-	3,074.76	-
EU 103 8RL Printing Press	-	-	-	-	-	3,045.20	-
EU 104 R17 Printing Press						1,581.86	
EU 201 5X Extrusion Coater/Laminator	-	-	-	-	-	3,403.26	-
EU 204 6X Extrusion Coater/Laminator	-	-	-	-	-	2,838.24	-
EU 205 25L Extrusion Coater/Laminator	-	-	-	-	-	1,336.86	-
Degreaser Unit EU 102 .	-	-	-	-	-	16.43	-
Degreaser UnitEU 105 .	-	-	-	-	-	16.43	-
11 head & 2 head printers	-	-	-	-	-	3.46	-
6X Coating Station NG Dryers	0.02	0.10	0.10	0.01	1.31	0.07	1.10
Thermal Oxidizers	0.31	1.24	1.24	0.10	16.38	0.90	13.76
Boilers EU 11 and EU 12	0.35	1.39	1.39	0.11	18.33	1.01	15.40
Insignificant NG	0.03	0.10	0.10	0.01	1.37	0.08	1.15
Hot Oil System	0.07	0.27	0.27	0.02	3.50	0.19	2.94
Welding and Cutting	3.04	3.04	3.04	-	-	-	-
Insignificant activities	0.50	0.50	0.50	-	-	0.42	-
Total Uncontrolled PTE	**4.31**	**6.64**	**6.64**	**0.25**	**40.90**	**15319.15**	**34.36**

Limited Potential to Emit (tons/year)

Emission Unit	PM	PM_{10}	$PM_{2.5}$*	SO_2	NO_x	VOC	CO
EU 101 6RL Printing Press	-	-	-	-	-	246.3	-
EU 103 8RL Printing Press	-	-	-	-	-		-
EU 104 R17 Printing Press	-	-	-	-	-		-
EU 201 5X Extrusion Coater/Laminator	-	-	-	-	-		-
EU 204 6X Extrusion Coater/Laminator	-	-	-	-	-		-
EU 205 25L Extrusion Coater/Laminator	-	-	-	-	-		-
EU 102 Cold Cleaner	-	-	-	-	-		-
EU 105 Cold Cleaner	-	-	-	-	-		-
11 head & 2 head printers	-	-	-	-	-		-
6X Coating Station NG Dryers	0.02	0.10	0.10	0.01	1.31	0.07	1.10
Thermal Oxidizers	0.31	1.24	1.24	0.10	16.38	0.90	13.76
Boilers EU11 and EU12	0.35	1.39	1.39	0.11	18.33	1.01	15.40
Hot Oil System	0.07	0.27	0.27	0.02	3.50	0.19	2.94
Insignificant NG	0.03	0.10	0.10	0.01	1.37	0.08	1.15
Welding and Cutting	3.04	3.04	3.04	-	-	-	-
Insignificant activities	0.50	0.50	0.50	-	-	0.42	-
Total Limited PTE	**4.31**	**6.64**	**6.64**	**0.25**	**40.90**	**248.97**	**34.36**

PSD minor limit

Controlled Potential to Emit (tons/year)

Emission Unit	PM	PM_{10}	$PM_{2.5}$*	SO_2	NO_x	VOC	CO
EU 101 6RL Printing Pres	-	-	-	-	-	61.5	-
EU 103 8RL Printing Press	-	-	-	-	-	60.9	-
EU 104 R17 Printing Press	-	-	-	-	-	31.6	-
EU 201 5X Extrusion Coater/Laminator	-	-	-	-	-	25.0	-
EU 204 6X Extrusion Coater/Laminator	-	-	-	-	-	56.8	-
EU 205 25L Extrusion Coater/Laminator	-	-	-	-	-	26.7	-
EU 102 Cold Cleaner	-	-	-	-	-	0.3	-
EU 105 Cold Cleaner	-	-	-	-	-	0.3	-
11 head & 2 head printers	-	-	-	-	-	3.5	-
6X Coating Station NG Dryers	0.02	0.10	0.10	0.01	1.31	0.07	1.10
Thermal Oxidizers	0.31	1.24	1.24	0.10	16.38	0.90	13.76
Boilers EU11 and EU12	0.35	1.39	1.39	0.11	18.33	1.01	15.40
Insignificant NG	0.03	0.10	0.10	0.01	1.37	0.08	1.15
Hot Oil System	0.07	0.27	0.27	0.02	3.50	0.19	2.94
Welding and Cutting	3.04	3.04	3.04	-	-	-	-
Insignificant activities	0.50	0.50	0.50	-	-	0.42	-
Total Controlled PTE	**4.31**	**6.64**	**6.64**	**0.25**	**40.90**	**269.32**	**34.36**

**PM2.5 listed is direct PM2.5*

Appendix A : HAP Summary of Emissions

Company Name: Sonoco Flexible Packaging, Inc
Address City IN Zip: 6502 South US Highway 31, Edinburgh, Indiana 46124
Permit Number: T081-47176-00005
Permit Reviewer: Kristen Squillace

HAP Uncontrolled/Unlimited PTE in tons/year (tpy)

Activity ID	**Methanol**	Benzene	Dichloro-benzene	Formal-dehyde	**Hexane**	Toluene	Lead	Cadmium	Chromium	Manganese	Nickel	MDI	**Total HAPs**
EU 101 6RL Printing Press	5.76	-	-	-	-	-	-	-	-	-	-	-	5.76
EU 103 8RL Printing Press	0.37	-	-	-	24.13	0.48	-	-	-	-	-	-	24.98
EU 104 R17 Printing Press	0.37	-	-	-	24.13	0.48	-	-	-	-	-	-	24.98
EU 201 5X Extrusion Coater/Laminator	3.33	-	-	-	-	-	-	-	-	-	-	-	3.33
EU 204 6X Extrusion Coater/Laminator	3.33	-	-	-	-	-	-	-	-	-	-	-	3.33
EU 205 25L Extrusion Coater/Laminator	-	-	-	-	-	-	-	-	-	-	-	153.37	153.37
Degreaser Unit EU 102	-	-	-	-	-	-	-	-	-	-	-	-	-
Degreaser UnitEU 105	-	-	-	-	-	-	-	-	-	-	-	-	-
6X Coating Station NG Dryers	-	2.76E-05	1.58E-05	9.86E-04	2.37E-02	4.47E-05	6.57E-06	1.45E-05	1.84E-05	4.99E-06	2.76E-05	-	2.48E-02
Thermal Oxidizers	-	3.44E-04	1.97E-04	1.23E-02	2.95E-01	5.57E-04	8.19E-05	1.80E-04	2.29E-04	6.22E-05	3.44E-04	-	0.31
Boilers EU 11 and EU 12	-	3.85E-04	2.20E-04	1.37E-02	3.30E-01	6.23E-04	9.17E-05	2.02E-04	2.57E-04	6.97E-05	3.85E-04	-	0.35
Insignificant NG	-	2.89E-05	1.65E-05	1.03E-03	2.47E-02	4.67E-05	6.87E-06	1.51E-05	1.92E-05	5.22E-06	2.89E-05	-	0.03
Hot Oil System	-	7.36E-05	4.20E-05	2.63E-03	6.31E-02	1.19E-04	1.75E-05	3.85E-05	4.91E-05	1.33E-05	7.36E-05	-	0.07
Welding and Cutting	-	-	-	-	-	-	-	-	-	-	-	-	-
Insignificant activities	-	-	-	-	-	-	-	-	-	-	-	-	-
Source-Wide Totals	**13.15**	8.59E-04	4.91E-04	3.07E-02	**48.99**	0.97	2.05E-04	4.50E-04	5.73E-04	1.55E-04	8.59E-04	153.37	**216.51**

HAP Limited PTE in tons/year (tpy)

Activity ID	Methanol	Benzene	Dichloro-benzene	Formal-dehyde	**Hexane**	Toluene	Lead	Cadmium	Chromium	Manganese	Nickel	MDI	**Total HAPs**
EU 101 6RL Printing Press	5.76	-	-	-	-	-	-	-	-	-	-	-	5.76
EU 103 8RL Printing Press	0.37	-	-	-	24.13	0.48	-	-	-	-	-	-	24.98
EU 104 10 RL Printing Press	0.37	-	-	-	24.13	0.48	-	-	-	-	-	-	24.98
EU 201 5X Extrusion Coater/Laminator	3.33	-	-	-	-	-	-	-	-	-	-	-	3.33
EU 204 6X Extrusion Coater/Laminator	3.33	-	-	-	-	-	-	-	-	-	-	-	3.33
EU 205 25L Extrusion Coater/Laminator	-	-	-	-	-	-	-	-	-	-	-	153.37	153.37
Degreaser Unit EU 102	-	-	-	-	-	-	-	-	-	-	-	-	-
Degreaser UnitEU 105	-	-	-	-	-	-	-	-	-	-	-	-	-
6X Coating Station NG Dryers	-	2.76E-05	1.58E-05	9.86E-04	2.37E-02	4.47E-05	6.57E-06	1.45E-05	1.84E-05	4.99E-06	2.76E-05	-	0.02
Thermal Oxidizers	-	3.44E-04	1.97E-04	1.23E-02	2.95E-01	5.57E-04	8.19E-05	1.80E-04	2.29E-04	6.22E-05	3.44E-04	-	0.31
Boilers EU 11 and EU 12	-	3.85E-04	2.20E-04	1.37E-02	3.30E-01	6.23E-04	9.17E-05	2.02E-04	2.57E-04	6.97E-05	3.85E-04	-	0.35
Insignificant NG	-	2.89E-05	1.65E-05	1.03E-03	2.47E-02	4.67E-05	6.87E-06	1.51E-05	1.92E-05	5.22E-06	2.89E-05	-	0.03
Hot Oil System	-	7.36E-05	4.20E-05	2.63E-03	6.31E-02	1.19E-04	1.75E-05	3.85E-05	4.91E-05	1.33E-05	7.36E-05	-	0.07
Welding and Cutting	-	-	-	-	-	-	-	-	-	-	-	-	-
Insignificant activities	-	-	-	-	-	-	-	-	-	-	-	-	-
Source-Wide Totals	13.15	8.59E-04	0.00	3.07E-02	**48.99**	0.97	2.05E-04	4.50E-04	5.73E-04	1.55E-04	8.59E-04	153.37	**216.51**

methanol and hexane each have a PTE greater than 10 ton/year.

HAP Controlled PTE in tons/year (tpy)

Activity ID	Methanol	Benzene	Dichloro-benzene	Formal-dehyde	**Hexane**	Toluene	Lead	Cadmium	Chromium	Manganese	Nickel	MDI	**Total HAPs**
EU 101 6RL Printing Press	0.12	-	-	-	-	-	-	-	-	-	-	-	0.12
EU 103 8RL Printing Press	0.01	-	-	-	0.48	0.01	-	-	-	-	-	-	0.50
EU 104 10 RL Printing Press	0.00	-	-	-	0.48	0.01	-	-	-	-	-	-	0.50
EU 201 5X Extrusion Coater/Laminator	3.33	-	-	-	-	-	-	-	-	-	-	-	3.33
EU 204 6X Extrusion Coater/Laminator	0.07	-	-	-	-	-	-	-	-	-	-	-	0.07
EU 205 25L Extrusion Coater/Laminator	-	-	-	-	-	-	-	-	-	-	-	3.07	0.50
Degreaser Unit EU 102	-	-	-	-	-	-	-	-	-	-	-	-	-
Degreaser UnitEU 105	-	-	-	-	-	-	-	-	-	-	-	-	-
6X Coating Station NG Dryers	-	2.76E-05	1.58E-05	9.86E-04	2.37E-02	4.47E-05	6.57E-06	1.45E-05	1.84E-05	4.99E-06	2.76E-05	-	0.02
Thermal Oxidizers	-	3.44E-04	1.97E-04	1.23E-02	2.95E-01	5.57E-04	8.19E-05	1.80E-04	2.29E-04	6.22E-05	3.44E-04	-	0.31
Boilers EU 11 and EU 12	-	3.85E-04	2.20E-04	1.37E-02	3.30E-01	6.23E-04	9.17E-05	2.02E-04	2.57E-04	6.97E-05	3.85E-04	-	0.35
Insignificant NG	-	2.89E-05	1.65E-05	1.03E-03	2.47E-02	4.67E-05	6.87E-06	1.51E-05	1.92E-05	5.22E-06	2.89E-05	-	0.03
Hot Oil System	-	7.36E-05	4.20E-05	2.63E-03	6.31E-02	1.19E-04	1.75E-05	3.85E-05	4.91E-05	1.33E-05	7.36E-05	-	0.07
Welding and Cutting	-	-	-	-	-	-	-	-	-	-	-	-	-
Insignificant activities	-	-	-	-	-	-	-	-	-	-	-	-	0.00
Source-Wide Totals	3.52	8.59E-04	0.00	3.07E-02	1.70	0.02	2.05E-04	4.50E-04	5.73E-04	1.55E-04	8.59E-04	3.07E+00	**5.78**

methanol and hexane and MDI each have a PTE greater than 10 ton/year.

Appendix A: Emission Calculations
Modification Summary

Company Name: Sonoco Flexible Packaging, Inc
Source Address: 6502 South US Highway 31, Edinburgh, Indiana 46124
Permit Number: T081-47176-00005
Reviewer: Kristen Squillace

PTE of Each Exempt Emission Unit (tons/yr)								
Emission Unit	**PM**	**PM10**	**PM2.5 ***	**SO_2**	**NOx**	**VOC**	**CO**	**Total HAPs**
propyl acetate/propyl alcohol storage tank	0.01	0.01	0.01	-	-	-	-	-
Total	**0.01**	**0.01**	**0.01**	**-**	**-**	**-**	**-**	**-**

Appendix A: Emissions Calculations
Potetial to Emit HAPs From Press and Coating Operations

Company Name: **Sonoco Flexible Packaging, Inc**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

		Uncontrolled HAP PTE (lb/hr)			Uncontrolled HAP PTE (ton/year)			Uncontrolled Total HAP (ton/yr)	Control Efficiency	Controlled HAP (ton/year)
Process Unit		Methanol	Toluene	Hexane	Methanol	Toluene	Hexane			
6RL Press		1.32	-	-	5.76	-	-	5.76	98.0%	0.12
8RL Press		0.08	0.11	5.51	0.37	0.48	24.13	24.98	98.0%	0.50
5X Coat/Laminator		0.76	-	-	3.33	-	-	3.33	0.0%	3.33
6X Coat/Laminator		0.76	-	-	3.33	-	-	3.33	98.0%	0.07
					12.78	**0.48**	**24.13**	**37.39**		**4.01**

Highest daily HAP usage provided by source. HAP PTE (lb/hr) calculated from 8 hour shift.

Methodology:
HAP PTE (lb/hr) = highest daily usage (lb/day) / (1 shift/day) * (1 shift/8 hrs)
HAP PTE(ton/yr) = HAP PTE (lb/hr) * 8760 hr/year * ton/2000 lb

Note:

During the application of polyurethane, component A (isocyanate) and component B (polyols) are mixed together and the components react quickly to form polyurethane, with negligible emissions of methylene diphenyl diisocyanate (MDI) (a volatile organic compound (VOC) and hazardous air pollutant (HAP)). MDI emissions, therefore, have been determined to be negligible. See EPA document "Methylene Diphenyl Diisocyanate (MDI) And Related Compounds" Action Plan [RIN 2070-ZA15] April 2011.

Emissions Calculations
VOC Emissions From Inkjet Printers

Company Name: **Sonoco Flexible Packaging, Inc**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

	Material					Material Specifc Gravity					Material VOC Content, weight %				
Device	V497-D	V732-D	V906-Q	16-83SR	16-85SR	V497-D	V732-D	V906-Q	16-83SR	16-85SR	V497-D	V732-D	V906-Q	16-83SR	16-85SR
11-head printer	X	X	X			0.86	0.8	0.83			56%	34%	84%		
2-head printer				X	X				0.86	0.8				84%	99%

	Material Usage, liters per day per head					Total Material Usage, liters per day					Total Material Usage, liters per year				
Device	V497-D	V732-D	V906-Q	16-83SR	16-85SR	V497-D	V732-D	V906-Q	16-83SR	16-85SR	V497-D	V732-D	V906-Q	16-83SR	16-85SR
11-head printer	0.75	0.18	0.01			8.25	1.98	0.11			3011.25	722.7	40.15		
2-head printer				1.32	1.32				2.64	2.64				963.6	963.6

	Total VOC emissions, kilograms per year					Total VOC emissions, tons per year					TOTAL VOC EMISSIONS FOR ALL PRINTERS		TONS PER YEAR
Device	V497-D	V732-D	V906-Q	16-83SR	16-85SR	V497-D	V732-D	V906-Q	16-83SR	16-85SR	**ton/yr**	lbs/day	**3.46**
11-head printer	1450.2	196.6	28.0			1.60	0.22	0.03			1.85	10.12	
2-head printer				696.1	763.2				0.77	0.84	1.61	8.82	

Total Material Usage, liters per day = Material Usage, liters per day per head x number of printer heads
Total Material Usage, liters per year = Total Material Usage, liters per day x 365 days per year
Total VOC emissions, kilograms per year = Total Material Usage, liters per year x Material Specific Gravity x Material VOC Content (wt%) x one kilogram water per liter
Total VOC emissions, tons per year = Total VOC emissions, kilograms per year x 2.205 pounds per kilograms x one ton per 2,000 pounds
Inkjet Printer materials do not contain HAP

Appendix A: Emissions Calculations
VOC From Printing Press Operations

Company Name: **Sonoco Flexible Packaging, Inc**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

THROUGHPUT

Press ID	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin^2/YEAR
EU 101 (6RL Press)	1000	52	327974

INK VOCS

Ink Name	Maximum Coverage	Weight % Volatiles*	Flash Off %	Throughput	Unlimited Emissions	Control Efficiency	Controlled Emissions
	(lbs/MMin^2)			(MMin^2/Year)	(tons/year)	%	(tons/year)
Henkel Tycel 393	25	75%	100.00%	327974	3074.76	98.0	61.50

THROUGHPUT

Press ID	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin^2/YEAR
EU 103 (8RL Press)	1000	51.5	324821

INK VOCS

Ink Name	Maximum Coverage	Weight % Volatiles*	Flash Off %	Throughput	Unlimited Emissions	Control Efficiency	Controlled Emissions
	(lbs/MMin^2)			(MMin^2/Year)	(tons/year)	%	(tons/year)
Henkel Tycel 393	25	75%	100.00%	324821	3045.20	98.0	60.90

*VOC (Tons/Year) = Maximum Coverage pounds per MMin^2 * Weight % volatiles (weight % of water & organics - weight % of water = weight % organics) * Flash off * Throughput * 1 Ton per 2000 pounds

Methodology

Throughput = Maxium line speed feet per minute * Convert feet to inches * Maximum print width inches * 60 minutes per hour * 8760 hours per year = MM
VOC = Maximum Coverage pounds per MMin^2 * Weight percentage volatiles (water minus organics) * Flash off * Throughput * Tons per 2000 pounds =
NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH O
(Source -OAQPS Draft Guidance, "Control of Volatile Organic Compound Emisions from Offset Lithographic Printing (

Appendix A: Emissions Calculations
VOC
From Extrusion Coater/Lamination Operations

Company Name: **Sonoco Flexible Packaging, Inc**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

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**	**Limited VOC (ton/yr)**	**Controlled VOC (ton/yr)**	Particulate Potential (ton/yr)	lb VOC/gal solids	VOC Control Efficiency	Transfer Efficiency
5X Laminator - Adcote 522	8.0	75.00%	0.0%	75.0%	0.0%	25.00%	2.50	51.8	6.00	6.00	777.00	18648.00	**3403.26**	**25.00**	**25.00**	0.00	24.00	0%	100%
6X Laminator - Adcote 522	8.0	75.00%	0.0%	75.0%	0.0%	25.00%	2.50	43.2	6.00	6.00	648.00	15552.00	**2838.24**	**-**	**56.76**	0.00	24.00	98%	100%

Methodology

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emissions Calculations
Natural Gas Combustion - Coating station dryers for EU 204
MM BTU/HR <100

Company Name: **Sonoco Flexible Packaging, Inc**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

	number of units	Heat Input Capacity (MMBtu/hr)	Total MMBTu/hr
6X Coat Dryers	2	1.5	3

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
3.0	26.3

	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.025	0.1	0.10	0.0	1.3	0.1	1.1

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
PM2.5 emission factor is condensable and filterable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
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

	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	2.759E-05	1.577E-05	9.855E-04	2.365E-02	4.468E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	6.570E-06	1.445E-05	1.840E-05	4.993E-06	2.759E-05
				Total	**0.025**

Methodology
Methodology is the same as above.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
VOC From Printing Press Operations

Company Name: **Sonoco Flexible Packaging**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

THROUGHPUT

Press ID	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin^2/YEAR
EU 104 (R17 Press)	1312.34	52	430414

INK VOCS

Ink Name	Maximum Coverage	Weight % Volatiles*	Flash Off %	Throughput	Unlimited Emissions	Control Efficiency	Controlled Emissions
	(lbs/MMin^2)			(MMin^2/Year)	(tons/year)	%	(tons/year)
Henkel Tycel 393	8.299	89%	100.00%	430414	1581.86	98.0	31.64

*VOC (Tons/Year) = Maximum Coverage pounds per MMin^2 * Weight % volatiles (weight % of water & organics - weight % of water = weight % organics) * Flash off * Throughput * 1 Ton per 2000 pounds

Methodology

Throughput = Maxium line speed feet per minute * Convert feet to inches * Maximum print width inches * 60 minutes per hour * 8760 hours per year = MMin^2 per Year

VOC = Maximum Coverage pounds per MMin^2 * Weight percentage volatiles (water minus organics) * Flash off * Throughput * Tons per 2000 pounds = Tons per Year

NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF 100%.

(Source -OAQPS Draft Guidance, "Control of Volatile Organic Compound Emisions from Offset Lithographic Printing (9

Appendix A: Emissions Calculations
Potetial to Emit HAPs From Press and Coating Operations

Company Name: **Sonoco Flexible Packaging**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

	Uncontrolled HAP PTE (lb/hr)			Uncontrolled HAP PTE (ton/year)			Uncontrolled Total HAP (ton/yr)	Control Efficiency	Controlled HAP (ton/year)
Process Unit	Methanol	Toluene	Hexane	Methanol	Toluene	Hexane			
R17 Press	0.08	0.11	5.51	0.37	0.48	24.13	24.98	98.0%	0.50
				0.37	**0.48**	**24.13**	**24.98**		**0.50**

Highest daily HAP usage provided by source. HAP PTE (lb/hr) calculated from 8 hour shift.

Methodology:
HAP PTE (lb/hr) = highest daily usage (lb/day) / (1 shift/day) * (1 shift/8 hrs)
HAP PTE(ton/yr) = HAP PTE (lb/hr) * 8760 hr/year * ton/2000 lb

Note:

During the application of polyurethane, component A (isocyanate) and component B (polyols) are mixed together and the components react quickly to form polyurethane, with negligible emissions of methylene diphenyl diisocyanate (MDI) (a volatile organic compound (VOC) and hazardous air pollutant (HAP)). MDI emissions, therefore, have been determined to be negligible. See EPA document "Methylene Diphenyl Diisocyanate (MDI) And Related Compounds" Action Plan [RIN 2070-ZA15] April 2011.

Appendix A: Emissions Calculations
VOC
From Extrusion Coater/Lamination Operations

Company Name: **Sonoco Flexible Packaging**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

Material	Material Type	Density (Lb/Gal)	Weight % VOC	wt% HAP (MDI)	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	**Potential VOC tons per year**	**Controlled VOC (ton/yr)**	Particulate Potential (ton/yr)	lb VOC/gal solids	VOC Control Efficiency	Transfer Efficiency	Potential HAP (MDI) Emissions (tons/yr)	Controlled HAP (MDI) Emissions (tons/yr)
Loctite Liofol LA 393	Solvent Based	9.0	26.2%	3.0%	25.00%	2.50	51.8	2.36	305.22	7325.27	**1336.86**	**26.74**	0.00	9.43	98%	100%	153.37	3.07
Michem Flex P2300	Water Based	8.3	0.2%	0.0%	25.00%	2.50	51.8	0.02	2.48	59.62	10.88	10.88	0.00	0.08	0%	100%	0.00	0.00

Methodology

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emissions Calculations
Natural Gas Combustion Only - 6X RTO & Hot Oil System
MM BTU/HR <100

Company Name: **Sonoco Flexible Packaging**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

	Number of units	Heat Input Capacity (MMBtu/hr)	Heat Input Capacity (MMBtu/hr)
Hot Oil System	1	8.0	8.0
Total			8.0

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
8.0	70.1

	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.07	0.27	0.27	0.02	3.50	0.19	2.94

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
PM2.5 emission factor is condensable and filterable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
10RL

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

	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	7.358E-05	4.205E-05	2.628E-03	6.307E-02	1.191E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.752E-05	3.854E-05	4.906E-05	1.332E-05	7.358E-05
				Total	**0.066**

Methodology
Methodology is the same as above.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
VOC Emission Calculations
Degreasing Operations

Company Name: **Sonoco Flexible Packaging, Inc**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

Degreasing Operations	Solvent Used	Equipment Usage (minutes/cycle)	Maximum Sovent Usage per Cycle (lb/cycle)	Maximum Usage (lbs/hr)	Weight % VOC	Maximum Uncontrolled VOC Emissions (ton/yr)	RTO efficiency %	Controlled VOC Emissions (ton/yr)
Cold Cleaner EU102	EGME, NMP	40	2.5	3.75	100.00%	16.43	98.00%	0.33
Cold Cleaner EU105	EGME, NMP	40	2.5	3.75	100.00%	16.43		0.33

PSD BACT Limit:

The VOC input to the cold cleaner degreasing unit EU 102 shall not exceed a total of 16.43 tons per twelve (12) consecutive month period.
The VOC emissions from the cold cleaner degreasing units EU 102 shall be controlled by an RTO. The overall control efficiency, including the capture and destruction efficiency, shall be at least 98%

Methodology

Maximum VOC emission rate (tpy) = 5.0 lb/cycle * 1 cycle/40 minutes * 60 min/hr * 8760 hr/yr * 1 ton/ 2000 lbs
Controlled VOC emission rate (tpy) = Uncontrolled emission rate (tpy) * (1- RTO eff.%)

Appendix A: Emissions Calculations
Natural Gas Combustion Only - Thermal Oxidizers for EU-101 & E
MM BTU/HR <100

Company Name: **Sonoco Flexible Packaging, Inc**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

	Number of units	Heat Input Capacity (MMBtu/hr)	Heat Input Capacity (MMBtu/hr)
6RL RTO	1	24	24
Megtec RTO	1	8.7	8.7
(new) 6X RTO	1	4.7	4.7
			37.4

Heat Input Capacity MMBtu/hr		Potential Throughput MMCF/yr	
37.4		327.6	41.2
4.7	New Unit		

	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100.0 **see below	5.5	84.0
New 6X RTO PTE	0.04	0.16	0.16	0.01	2.06	0.11	1.73
Total Potential Emission in tons/yr	0.3	1.2	1.2	0.1	16.4	0.9	13.8

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
PM2.5 emission factor is condensable and filterable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
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

	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	3.440E-04	1.966E-04	1.229E-02	2.949E-01	5.570E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	8.191E-05	1.802E-04	2.293E-04	6.225E-05	3.440E-04
				Total	**0.309**

Methodology
Methodology is the same as above.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion EU-11 & EU-12
MM BTU/HR <100

Company Name: **Sonoco Flexible Packaging, Inc**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
41.9	366.6

	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.3	1.4	1.39	0.1	18.3	1.0	15.4

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
PM2.5 emission factor is condensable and filterable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
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

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

	Heat Input Capacity (MMBtu/hr)
5X heater	1.60
6X heater	1.60
Total	**3.20**

Company Name: **Sonoco Flexible Packaging, Inc**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
3.2	1020	27.5

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.03	0.10	0.10	0.01	1.37	0.08	1.15

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutants (HAPs)

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	2.9E-05	1.6E-05	1.0E-03	0.02	4.7E-05	**0.03**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	6.9E-06	1.5E-05	1.9E-05	5.2E-06	2.9E-05	**7.5E-05**
					Total HAPs	**0.03**
					Worst HAP	**0.02**

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Welding and Thermal Cutting

Company Name: **Sonoco Flexible Packaging, Inc**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

Welding consuming less than six hundred twenty-five (625) pounds of rod or wire per day
Torch cutting using less than three thousand four hundred (3,400) inches per hour of stock one (1) inch thickness or less per cut.

Process	Number of Stations	Maximum electrode consumption per station (lbs/hr)	Maximum electrode consumption per station (lbs/day)		Emission Factors* (lb pollutant/lb electrode)	Potential to Emit (lbs/hr)
Welding					PM/PM10/PM2.5	PM/PM10/PM2.5
Metal Inert Gas (MIG)(carbon steel)	1	26.04	625		0.0055	0.143

	Number of Stations	Maximum Metal Thickness Cut (inches)	Maximum Metal Cutting Rate (inches/minute)	Maximum Metal Cutting Rate (inches/hour)	Emission Factors (lb pollutant/1,000 inches cut, 1 inch thick)**	Potential to Emit (lbs/hr)
Flame Cutting					PM/PM10/PM2.5	PM/PM10/PM2.5
Oxyacetylene	1	1	56.50	3390	0.1622	0.550
Totals						
Potential to Emit (lbs/hr)						0.69
Potential to Emit (lbs/day)						16.63
Potential to Emit (tons/year)						3.04

Methodology:

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

**Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted).
Therefore, the emission factor for plasma cutting is for 8 mm thick rather than 1 inch, and the maximum metal thickness is not used in calculting the emissions.
Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick

Plasma cutting: Potential to Emit (lbs/hr) = (Number of stations) x (Maximum Metal Cutting Rate, inches/minute) x (60 minutes/hr) x (Emission Factor, lb pollutant/1,000 inches cut, 8 mm thick)

Cutting: Potential to Emit (lbs/hr) = (Number of stations) x (Maximum Metal Thickness, inches) x (Maximum Metal Cutting Rate, inches/minute) x (60 minutes/hour) x (Emission Factor, lb pollutant/1,000 inches cut, 1" thick)

Welding: Potential to Emit (lbs/hr) = (Number of stations) x (Maximum electode consumption per station, lbs/hr) x (Emission Factor, lb pollutant/lb of electrode used)

Potential to Emit (lbs/day) = Potential to Emit (lbs/hr) x (24 hours/day)

Potential to Emit (tons/year) = Potential to Emit (lbs/hr) x (8,760 hours/year) x (1 ton/2,000 lbs)

Appendix A: Emission Calculations
Miscellaneous Insignificant

Company Name: **Sonoco Flexible Packaging, Inc**
Address City IN Zip: **6502 South US Highway 31, Edinburgh, Indiana 46124**
Permit Number: **T081-47176-00005**
Permit Reviewer: **Kristen Squillace**

1. Enclosed systems for conveying plastic raw materials and plastic finished goods (only the former* is a source of emissions)
* emission factor approved by IDEM 113-38838-00103, issued June 13, 2018.
Actual tons of resin throughput was extrapolated to 8760 hours

2017 Actual Throughput (lb/yr)	
13,344,689	
706,692	
3,330,200	
148,100	
17,529,681	Total lb/yr
8,764.84	Total ton/yr

Emission Factor PM, PM10, PM2.5 lb/ton	Potential throughput** tons/yr	PTE PM, PM10, PM2.5 tons/yr	
0.0432	11459.70	**0.25**	loading silo
0.0432	11459.70	**0.25**	convey to plant

**based on ratioed hours of actual opration plus a 20% safety factor

Actual throughput (ton/yr) = Actual Throughput (lb/yr) / 2000 lb/ton
Potential throughput (tons/yr) = Actual throughput (ton/yr) * [8760 days/yr / 8040 days/yr] * 1.2 safety factor

2. Storage tanks

	2017 actual (ton/yr)	potential (ton/yr)	potential (lb/day)
n-propyl alcohol	0.006	**0.01**	0.04
ethyl alcohol	0.0259	**0.03**	0.19
ethyl acetate	0.163	**0.21**	1.17
propyl acetate	0.116	**0.15**	0.83
propyl acetate/propyl alcohol		**0.01**	0.05
	Total PTE	**0.42**	

Potential emissions (tons/yr) = Actual emissions (ton/yr) * [8760 days/yr / 8040 days/yr] * 1.2 safety factor

3. closed loop heating a cooling systems - not a source of emissions
4. heat exchanger cleaning and repair - not a source of emissions
5. blowdown for boilers and compressors - not a source of emissions

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Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Tyler Wall
Sonoco Flexible Packaging Incorporated
6502 S US Hwy 31
Edinburgh, IN 46124

DATE: June 28, 2024

FROM: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
TV Renewal
081-47176-00005

This notice is to inform you that a final decision has been issued for the air permit application referenced above.

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. In addition, the Notice of Decision has been sent to the OAQ Permits Branch Interested Parties List and, if applicable, the Consultant/Agent and/or Responsible Official/Authorized Individual.

The final decision and supporting materials are available electronically; the original signature page is enclosed for your convenience. The final decision and supporting materials available electronically at:

IDEM's online searchable database: http://www.in.gov/apps/idem/caats/ . Choose Search Option **by Permit Number**, then enter permit 47176

and

IDEM's Virtual File Cabinet (VFC): https://www.in.gov/idem. Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

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, or have difficulty accessing the documents online, 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 8/20/20-acces via website

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Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

June 28, 2024

TO: Edinburgh Wright-Hageman Public Library

From: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Sonoco Flexible Packaging Incorporated
Permit Number: 081-47176-00005

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 1/9/2017

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Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

June 28, 2024
Sonoco Flexible Packaging Incorporated
081-47176-00005

To: Interested Parties

This notice is to inform you that a final decision has been issued for the air permit application referenced above. This notice is for informational purposes only. You are not required to take any action.

You are receiving this notice because you asked to be on IDEM's notification list for this company and/or county; or because your property is nearby the company being permitted; or because you represent a local/regional government entity.

The enclosed Notice of Decision Letter provides additional information about the final permit decision.

The final decision and supporting materials are available electronically at:

IDEM's online searchable database: http://www.in.gov/apps/idem/caats/ . Choose Search Option by Permit Number, then enter permit 47176

and

IDEM's Virtual File Cabinet (VFC): https://www.in.gov/idem. Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

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.

Please Note: *If you would like to be removed from the Air Permits mailing list, please contact Joanne Smiddie-Brush with the Air Permits Administration Section at 1-800-451-6027, ext. 3-0185 or via e-mail at JBRUSH@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure
Final Interested Parties Cover Letter 10/13/2023

Mail Code 61-53

IDEM Staff	CMOSIER 6/28/2024 Sonoco Flexible Packaging Incorporated 081-47176-00005 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Tyler Wall Sonoco Flexible Packaging Incorporated 6502 S US Hwy 31 Edinburgh IN 46124 (Source CAATS) via UPS									
2		Michael Leuck Plant Manager Sonoco Flexible Packaging Incorporated 6502 S US Hwy 31 Edinburgh IN 46124 *(RO CAATS)*									
3		Johnson County Commissioners 86 W Court St Franklin IN 46131 *(Local Official)*									
4		Johnson County Health Department 460 N Morton St, Ste A Franklin IN 46131 *(Health Department)*									
5		Frederick & Iva Moore 6019 W 650 N Ligonier IN 46767 *(Affected Party)*									
6		Larry & Becky Bischoff 10979 N Smokey Row Rd Mooresville IN 46158 *(Affected Party)*									
7		Edinburgh Wright-Hageman Public Library 119 W Main Cross St Edinburgh IN 46124-1499 *(Library)*									
8		Edinburgh Town Council and Town Manager PO Box 65 Edinburgh IN 46124 *(Local Official)*									
9		Greenwood City Council and Mayors Office 300 S Madison Ave Greenwood IN 46142-3149 *(Local Official)*									
10		Holly Argiris Environmental Resources Management (ERM) 8425 Woodfield Crossing Blvd Ste 560-W Indianapolis IN 46240 *(Consultant)*									
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