State of Ohio Environmental Protection Agency

Street Address:
Lazarus Gov. Center
50 West Town Street, Suite 700
Columbus, OH 43215

TELE: (614) 644-3020 **FAX:** (614) 644-2329

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

07/06/07

CERTIFIED MAIL

RE: Preliminary Proposed Title V
Chapter 3745-77 permit

02-43-08-1207
CFF of Avery Dennison
Jeff Lyden
P.O. Box 8008
Painesville, OH 44077

Dear Jeff Lyden:

Enclosed is the Ohio EPA Preliminary Proposed Title V permit that was issued in draft form on 05/17/07. The comment period for the Draft permit has ended. We are now ready to submit this permit to USEPA for approval.

We are submitting this for your review and comment. If you do not agree with the Preliminary Proposed Title V permit as written, you now have the opportunity to raise your concerns. **In order to facilitate our review of all the comments or concerns you may have with the enclosed preliminary proposed permit, please provide a hand marked-up copy of the permit showing the changes you think are necessary, along with any additional summary comments, within fourteen (14) days from your receipt of this letter to:**

Andrew Hall
Permit Review/Development Section
Ohio EPA, Division of Air Pollution Control
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43215

and

Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087
(330) 425-9171

Also, if you believe that it is necessary to have an informal conference with us, then, as part of your written comments, you should request a conference concerning the written comments.

If comments are not submitted within fourteen (14) days of your receipt of this letter, we will forward the proposed permit to USEPA for approval. All comments received will be carefully considered before proceeding to the proposed permit.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

cc: Northeast District Office
File, DAPC PIER

State of Ohio Environmental Protection Agency

PRELIMINARY PROPOSED TITLE V PERMIT

Issue Date: 07/06/07	Effective Date: To be entered upon final issuance	Expiration Date: To be entered upon final issuance

This document constitutes issuance of a Title V permit for Facility ID: 02-43-08-1207 to:

CFF of Avery Dennison
5750 Heisley Road
Mentor, OH 44060

Emissions Unit ID (Company ID)/Emissions Unit Activity Description

K001 (CF-1 Coating Line) Paper and film coating line K002 (CF-2 Coating Line)	Paper and film coating line K003 (CF-3 Coating Line)	Paper and film coating line

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-04(A) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087
(330) 425-9171

Ohio Environmental Protection Agency

_____

Chris Korleski
Director

PART I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Section

1. Monitoring and Related Record Keeping and Reporting Requirements

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.III of Part III of this Title V permit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

i. The date, place (as defined in the permit), and time of sampling or measurements.

ii. The date(s) analyses were performed.

iii. The company or entity that performed the analyses.

iv. The analytical techniques or methods used.

v. The results of such analyses.

vi. The operating conditions existing at the time of sampling or measurement.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c. The permittee shall submit required reports in the following manner:

i. **All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:**

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year in accordance with General Term and Condition A.1.c.ii below; and each report shall cover the previous calendar quarter (An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c)).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) constitutes a violation of an emission limitation (or control requirement) and, therefore, is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those

reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any scheduled maintenance, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

ii. **Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.IV of Part III of this Title V permit or, in some cases, in Part II of this Title V permit, all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this General Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this General Term and Condition.

See B.6 below if no deviations occurred during the quarter.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

iii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with General Term and Condition A.1.c.ii above shall be submitted in the following manner:**

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; General Terms and Conditions: A.2, A.3, A.4, A.6.e, A.7, A.12, A.14, A.18, A.19, A.20, and A.22 of Part I of this Title V permit, as well as any deviations from the requirements in Section A.V or A.VI of Part III of this Title V permit**,** and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with General Term and Condition A.1.c.ii above shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by

permit or rule for the insignificant activities or emissions levels (IEU) identified in Part II.A of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with General Term and Condition A.1.c.ii above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.
(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))

iv. Each written report shall be signed by a responsible official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."
(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

v. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

2. Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in General Term and Condition A.1.c.i above.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. Risk Management Plans

If applicable, the permittee shall develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. (“Act”); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

a. a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or

b. as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.
(Authority for term: OAC rule 3745-77-07(A)(5))

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
(Authority for term: OAC rule 3745-77-07(A)(6))

6. General Requirements

a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.

b. 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 federally enforceable terms and conditions of this permit.

c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

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

e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

f. Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable upon final issuance of all applicable OAC Chapter 3745-35 operating permits and/or registrations for all subject emissions units located at the facility and:

i. the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a “major source” as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

ii. the permittee no longer meets the definition of a “major source” as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or

iii. a combination of i. and ii. above.

The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.
(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.
(Authority for term: OAC rule 3745-77-07(A)(8))

8. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.
(Authority for term: OAC rule 3745-77-07(A)(9))

9. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must

record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these general terms and conditions shall apply to all operating scenarios authorized in this permit.
(Authority for term: OAC rule 3745-77-07(A)(10))

10. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

a. Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.

c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.

d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

11. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.
(Authority for term: OAC rule 3745-77-07(B))

12. Compliance Requirements

a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.

iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:

i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted (i.e., postmarked) on or before April 30th of each year during the permit term.

ii. Compliance certifications shall include the following:

(a) An identification of each term or condition of this permit that is the basis of the certification.

(b) The permittee's current compliance status.

(c) Whether compliance was continuous or intermittent.

(d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.

(e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.

iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

13. Permit Shield

a. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

b. This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

14. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

15. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

(Authority for term: OAC rule 3745-77-07(G))

16. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.

b. The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).

d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit to install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.
(Authority for term: OAC rule 3745-77-07(I))

17. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.
(This term is provided for informational purposes only.)

18. Insignificant Activities or Emissions Levels

Each IEU that has one or more applicable requirements shall comply with those applicable requirements.
(Authority for term: OAC rule 3745-77-07(A)(1))

19. Permit to Install Requirement

Prior to the “installation” or “modification” of any “air contaminant source,” as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.
(Authority for term: OAC rule 3745-77-07(A)(1))

20. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.
(Authority for term: OAC rule 3745-77-07(A)(1))

21. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the responsible official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the responsible official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

No emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.
(Authority for term: OAC rule 3745-77-01)

22. Title VI Provisions

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(Authority for term: OAC rule 3745-77-01(H)(11))

B. ***State Only Enforceable Section***

1. Reporting Requirements Related to Monitoring and Record Keeping Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

2. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

3. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

4. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

5. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

6. Additional Reporting Requirements When There Are No Deviations of <u>Federally Enforceable</u> Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

a. where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in General Term and Condition A.1.c.ii; or

b. where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; or

c. where the company's responsible official has certified that an emissions unit has been permanently shut down.

Part II - Specific Facility Terms and Conditions

A. State and Federally Enforceable Section

1. 40 CFR Part 63, Subpart JJJJ MACT Requirements

These emissions units (K001, K002 and K003) because of the potential to emit of HAPS from these coating lines are subject to the applicable emission limitation(s) and/or control measures, operational restrictions, monitoring and/or record keeping requirements, reporting requirements, testing requirements and the general and/or other requirements specified in 40 CFR Part 63, Subpart JJJJ, in accordance with 40 CFR Parts 63.3280 through 63.3410 (including the Table(s) and Appendix(ices) referenced in Subpart JJJJ), which are included in the text of Attachment 1 hereto, and are hereby incorporated into this permit as if fully rewritten.

2. 40 CFR Part 63, Subpart KK MACT Requirements

Emissions unit (K001) because of the potential to emit of HAPS from the coating lines located at this facility and the printing capability of this line is subject to the applicable emission limitation(s) and/or control measures, operational restrictions, monitoring and/or record keeping requirements, reporting requirements, testing requirements and the general and/or other requirements specified in 40 CFR Part 63, Subpart KK, in accordance with 40 CFR Parts 63.820 through 63.830 (including the Table(s) and Appendix(ices) referenced in Subpart KK), which are included in the text of Attachment 2 hereto, and are hereby incorporated into this permit as if fully rewritten.

B. State Only Enforceable Section

1. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements (as defined in OAC rule 3745-77-01(H)) or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

Z001 - adhesive tank;
Z002 - adhesive tank;
Z003 - adhesive tank;
Z004 - adhesive tank;
Z005 - adhesive tank;
Z006 - adhesive tank;
Z007 - adhesive tank;
Z008 - waste-water treatment tank;
Z009 - waste-water treatment tank;
Z010 - 4.158 mmBtu/hour plant air heating unit (Heater 1);
Z011 - 4.455 mmBtu/hour plant air heating unit (Heater 2);
Z012 - 4.72 mmBtu/hour plant air heating unit (Heater 3); and
Z013 - 4.0 mmBtu/hour plant air heating unit (Heater 4).

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: CF-1 Coating Line (K001)

Activity Description: Paper and film coating line

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Paper and film coating line, CF - 1	OAC rule 3745-31-05(A)(3) (PTI 02-03703)	Volatile organic compounds (VOC) emissions from coatings and cleanup materials employed in this emissions unit shall not exceed 99 tons per year. See section A.II.1 of these terms and conditions.
	OAC rule 3745-21-09(F)	The permittee shall not cause, allow or permit the discharge into the ambient air of any VOC in excess of 2.9 pounds of VOC per gallon of coating, excluding water and exempt solvents.
	40 CFR Part 60, Subpart RR	The permittee shall not cause the discharge into the atmosphere of more than 0.20 kg of VOC/kg of coating solids applied, calculated as a mass-weighted average for each calendar month.
	40 CFR Part 63, Subpart KK	Exempt See Part II, section A.2 and sections A.I.2.a, A.I.2.b and A.III.1 below.
	40 CFR Part 63, Subpart JJJJ	The permittee shall not discharge organic HAP emissions into the atmosphere of more than 4 percent of the mass of coating applied or more than 20 percent of the mass of coating solids applied calculated for each month. See Part II, section A.1.

2. Additional Terms and Conditions

2.a The permittee has chosen to exclude this emissions unit, which is used primarily for coating, laminating, or other operations, from the 40 CFR Part 63, Subpart KK, Printing and Publishing MACT requirements.

2.b The sum of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the printing process using product and packaging rotogravure work stations in each month shall never exceed five (5) weight-percent of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by this emissions unit in that month, including all inboard and outboard stations.

II. Operational Restrictions

1. For each calendar year of operation, this emissions unit shall be operated so as not to exceed the following maximum year-to-date emission limitations at the end of each month:

Month	Maximum Year-to-Date VOC Emissions (in tons)
January	13
February	25
March	36
April	46
May	55
June	63
July	70
August	76
September	82
October	88
November	92
December	99

[Authority for Term: OAC rule 3745-77-07(A)(1) and PTI 02-03703]

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following information for five (5) years and submit it to the Administrator of US EPA and/or the Director (Ohio EPA Northeast District Office) upon request:

a. the total mass of each material applied each month in this emissions unit, including all inboard and outboard stations;

b. the total mass of all materials applied each month in this emissions unit, including all inboard and outboard stations;

c. the total mass of each material applied each month in this emissions unit by product and packaging rotogravure printing work stations; and

d. the total mass of all materials applied each month on this emissions unit by product and packaging rotogravure printing work stations.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 02-03703]

III. Monitoring and/or Record Keeping Requirements (continued)

2. The permittee shall collect and record the following information each month for this emissions unit:

a. the name and identification number of each coating and cleanup material, as applied;

b. the VOC content of each coating (excluding water and exempt solvents), in pounds per gallon, as applied;

c. the VOC content of each coating (including water and exempt solvents) and cleanup material, in pounds per gallon, as applied;

d. the amount of each coating and cleanup material employed, in gallons; and

e. the total VOC emissions from all coatings and cleanup materials, in tons.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

3. Each month, the permittee shall sum the monthly VOC emission rates for the calendar year, and shall maintain a year-to date record of the total VOC emissions from all coatings and cleanup materials for this emissions unit, in tons per year.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall maintain a calendar month record of the following information:

a. the name and identification number for each of the coatings used;

b. the weighted average of the mass of solvent used per mass of coating solids applied, in kg VOC/kg of coating solids, calculated in accordance with the following:

i. the weight fraction of organics and the weight fraction of solids of each coating applied shall be determined by using Reference Method 24 or other test method approved by U.S.EPA, or by the coating manufacturer's formulation data;

ii. the weighted average shall be calculated by using the following equation:

G = (TWMo) / (TWMs)

where:

G = the calculated weighted average mass (kg) of VOC per mass (kg) of coating solids applied each calendar month;

TWMo = the sum, from i = 1 to i = n, of (Woi x Mci)i;

TWMs = the sum, from i = 1 to i = n, of (Wsi x Mci)i;

i = subscript denoting an individual coating;

n = the number of different coatings;

Mci = the total mass (kg) of each coating (i) applied during the calendar month as determined from facility records;

Woi = the weight fraction of organics applied of each coating (i) applied during a calendar month as determined from Reference Method 24 or the coating manufacturer's formulation data; and

Wsi = the weight fraction of solids applied of each coating (i) applied during a calendar month as determined from Reference Method 24 or the coating manufacturer's formulation data.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 02-03703]

III. Monitoring and/or Record Keeping Requirements (continued)

5. The permittee shall collect, record and determine where appropriate the following information each month for this emissions unit:

a. the name and identification number of each coating employed;

b. the average of the mass of HAP emissions per mass of coating solids applied, in kg HAP/kg coating solids applied, calculated in accordance with the equations in section 63.3370(c)(4) of 40 CFR Part 63, Subpart JJJJ, and as follows:

i. the weight fraction of HAP(s) and the weight fraction of coating solids of each coating applied shall be determined by 40 CFR Part 63, Appendix A, Reference Method 311 or 40 CFR Part 60, Appendix A, Reference Method 24, or other test method approved by U.S.EPA, or by the coating manufacturer's formulation data, if approved by U.S. EPA;

ii. the average shall be calculated using equation 5 in section 63.3370(c)(4) of the attached MACT standard, 40 CFR Part 63, Subpart JJJJ with the following variables:

where:

Hs = 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;

Chi = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg;

Mi = Mass of as-purchased coating material, i, applied in a month, kg;

q = Number of different materials added to the coating material;

Chij = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg;

Mij = Mass of material, j, added to as-purchased coating material, i, in a month, kg;

Mvret = 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.);

Csi = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg; and

Csij = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass-fraction, kg/kg;

c. the average of the mass of HAP emissions per mass of coating applied, in kg HAP/kg coating applied, calculated in accordance with the equations in section 63.3370(c)(4) of 40 CFR Part 63, Subpart JJJJ, and as follows:

i. the weight fraction of HAP and the weight fraction coating of each coating applied shall be determined by 40 CFR Part 63, Appendix A, Reference Method 311, 40 CFR Part 60, Appendix A, Reference Method 24, or other test method approved by U.S. EPA, or by the coating manufacturer's formulation data, if approved by U.S.EPA;

III. Monitoring and/or Record Keeping Requirements (continued)

ii. the average shall be calculated using equation 4 of Section 63.3370(c)(3) of 40 CFR Part 63, Subpart JJJJ:

where:

HL = 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;

Chi = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg;

Mi = Mass of as-purchased coating material, i, applied in a month, kg;

q = Number of different materials added to the coating material;

Chij = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg;

Mij = Mass of material, j, added to as-purchased coating material, i, in a month, kg; and

Mvret = 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.).

[Authority for Term: OAC rule 3745-77-07(C)(1)]

IV. Reporting Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install No. 02-3703, issued on February 28, 1990: section A.IV.2 in this Title V permit. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

IV. Reporting Requirements (continued)

2. The permittee shall submit deviation (excursion) report that include the following information for this emissions unit:

a. an identification of each month during which any noncomplying coatings (VOC content exceeded 2.9 pounds of VOC per gallon of coating, excluding water and exempt solvents) were employed, and the actual coating content, in pounds of VOC per gallon of coating, excluding water and exempt solvent for each such coating;

b. an identification of each month during which the year-to-date VOC emissions from the coatings and cleanup materials exceeded the limitations in section A.II.1 of these terms and conditions, and the actual VOC emissions for each such month;

c. an identification of each month during which the mass-weighted average VOC emissions exceeded 0.20 kg VOC/kg of coating solids applied, and the actual mass-weighted average VOC emissions, in kg VOC/kg of coating solids, for each such month;

d. an identification of each month during which the five (5) weight-percent limitation specified in A.I.2.b was exceeded, and the actual weight-percent for the month; and

e. an identification of each month during which the average HAP emissions from coatings exceed 20% of the mass of coating solids applied as described in equation 5 for Hs in section 63.3370(c)(4) of the attached MACT standard, 40 CFR Part 63, Subpart JJJJ and 4% of the mass of coatings, applied as described in section A.III.5.c.ii using equation 4 of HL of section 63.3370(c)(3) of 40 CFR Part 63, Subpart JJJJ.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

3. All deviation (excursion) reports shall be submitted in accordance with section A.1 of the General Terms and Conditions.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

4. The permittee shall also submit annual reports of the VOC emissions from this emissions unit. These reports shall include the calculations, shall be submitted by February 1 of each year, and shall cover the previous calendar year.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

V. Testing Requirements

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:

The permittee shall not cause, allow or permit the discharge into the ambient air of any VOC in excess of 2.9 pounds of VOC per gallon of coating, excluding water and exempt solvents.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.1. of these terms and conditions. In accordance with OAC rule 3745-21-04(B)(5), USEPA Method 24 shall be used to determine the VOC content of the coatings, or other EPA test method, including SW-846 and 8260 A, or any alternative compliance method including formulation data, manufacturer's specifications, alternative equivalent test methods, if approved by USEPA.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

V. Testing Requirements (continued)

1.b Emission Limitation:

The permittee shall not cause the discharge into the atmosphere of more than 0.20 kg of VOC/kg of coating solids applied, calculated as a mass-weighted average for each calendar month.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.4 of these terms and conditions.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

1.c Emission Limitation:

VOC emissions from coatings and cleanup materials employed in this emissions unit shall not exceed 99 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.3 of these terms and conditions.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 02-03703]

1.d Emission Limitation:

The permittee shall not discharge into the atmosphere emissions of more than 20 percent of the mass of HAPs to mass of coating solids applied (0.20 kg HAPs/kg coating solids), calculated as a mass-weighted average for each calendar month.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.5 of these terms and conditions.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

1.e Emission Limitation:

The permittee shall not discharge into the atmosphere emissions of more than 4% of the mass of HAPs to the mass of coating, applied (0.04 kg HAPs/kg of coating), calculated as a mass-weighted average for each calendar month.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.5 of these terms and conditions.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

2. USEPA Method 24 or GCMS, Capillary Column Technique Method 8260A shall be used to determine the VOC contents of the cleanup materials employed in this emissions unit, unless otherwise approved by Ohio EPA.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: CF-2 Coating Line (K002)

Activity Description: Paper and film coating line

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Paper and film coating line with ovens and corona treaters, CF - 2	OAC rule 3745-31-05(A)(3) (PTI 02-15512)	Volatile organic compounds (VOC) emissions shall not exceed 21.0 pounds per hour from coatings and cleanup materials. Nitrogen oxides (NOx) emissions shall not exceed 1.5 pounds per hour. Ozone emissions shall not exceed 0.62 pound per hour. See sections A.I.2.a and A.II.1 of these terms and conditions.
	OAC rule 3745-21-09(F)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60, Subpart RR	The permittee shall not cause the discharge into the atmosphere of more than 0.20 kg of VOC/kg of coating solids applied, calculated as a mass-weighted average for each calendar month.
	40 CFR Part 63, Subpart JJJJ	The permittee shall not discharge organic HAP emissions into the atmosphere of more than 4 percent of the mass of coating applied or more than 20 percent of the mass of coating solids applied calculated for each month. See Part II, section A.1.

2. Additional Terms and Conditions

2.a The permittee shall only employ emulsions (water based coatings) with a maximum VOC content of 0.0623 pound per gallon of coating in this emissions unit.

II. Operational Restrictions

1. The permittee shall use low NOx burners at all times when this emissions unit is in operation.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI 02-15512]

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:

a. the name and identification number of each coating and cleanup material, as applied;

b. the VOC content of each coating and cleanup material in pounds per gallon, as applied;

c. the amount of each coating and cleanup material employed, in gallons per day;

d. the total VOC emissions from all coatings and cleanup materials, in pounds per day;

e. the total number of hours the emissions unit was in operation; and

f. the average hourly VOC emission rate for all coatings and cleanup materials, i.e., (d)/(e), in pounds per hour (average).

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 02-15512]

III. Monitoring and/or Record Keeping Requirements (continued)

2. The permittee shall maintain a calendar month record of the following information:

a. the name and identification number for each of the coatings used;

b. the weighted average of the mass of solvent used per mass of coating solids applied, in kg VOC/kg of coating solid, calculated in accordance with the following:

i. the weight fraction of organics and the weight fraction of solids of each coating applied shall be determined by using Reference Method 24 or other test method approved by U.S. EPA, or by the coating manufacturer's formulation data;

ii. the weighted average shall be calculated by using the following equation:

G = (TWMo) / (TWMs)

where:

G = the calculated weighted average mass (kg) of VOC per mass (kg) of coating solids applied each calendar month;

TWMo = the sum, from i = 1 to i = n, of (Woi x Mci)i;

TWMs = the sum, from i = 1 to i = n, of (Wsi x Mci)i;

i = subscript denoting an individual coating;

n = the number of different coatings;

Mci = the total mass (kg) of each coating (i) applied during the calendar month as determined from facility records;

Woi = the weight fraction of organics applied of each coating (i) applied during a calendar month as determined from Reference Method 24 or the coating manufacturer's formulation data; and

Wsi = the weight fraction of solids applied of each coating (i) applied during a calendar month as determined from Reference Method 24 or the coating manufacturer's formulation data.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 02-15512]

3. The permittee shall collect, record and determine where appropriate the following information each month for this emissions unit:

a. the name and identification number of each coating employed;

b. the average of the mass of HAP emissions per mass of coating solids applied, in kg HAP/kg coating solids applied, calculated in accordance with the equations in section 63.3370(c)(4) of 40 CFR Part 63, Subpart JJJJ, and as follows:

i. the weight fraction of HAP(s) and the weight fraction of coating solids of each coating applied shall be determined by 40 CFR Part 63, Appendix A, Reference Method 311 or 40 CFR Part 60, Appendix A, Reference Method 24, or other test method approved by U.S.EPA, or by the coating manufacturer's formulation data, if approved by U.S. EPA;

ii. the average shall be calculated using equation 5 in section 63.3370(c)(4) of the attached MACT standard, 40 CFR Part 63, Subpart JJJJ with the following variables:

III. Monitoring and/or Record Keeping Requirements (continued)

where:

Hs = 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;

Chi = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg;

Mi = Mass of as-purchased coating material, i, applied in a month, kg;

q = Number of different materials added to the coating material;

Chij = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg;

Mij = Mass of material, j, added to as-purchased coating material, i, in a month, kg;

Mvret = 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.);

Csi = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg; and

Csij = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass-fraction, kg/kg;

c. the average of the mass of HAP emissions per mass of coating applied, in kg HAP/kg coating applied, calculated in accordance with the equations in section 63.3370(c)(4) of 40 CFR Part 63, Subpart JJJJ, and as follows:

i. the weight fraction of HAP and the weight fraction coating of each coating applied shall be determined by 40 CFR Part 63, Appendix A, Reference Method 311, 40 CFR Part 60, Appendix A, Reference Method 24, or other test method approved by U.S. EPA, or by the coating manufacturer's formulation data, if approved by U.S.EPA;

III. Monitoring and/or Record Keeping Requirements (continued)

ii. the average shall be calculated using equation 4 of Section 63.3370(c)(3) of 40 CFR Part 63, Subpart JJJJ:

where:

HL = 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;

Chi = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg;

Mi = Mass of as-purchased coating material, i, applied in a month, kg;

q = Number of different materials added to the coating material;

Chij = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg;

Mij = Mass of material, j, added to as-purchased coating material, i, in a month, kg; and

Mvret = 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.).

[Authority for Term: OAC rule 3745-77-07(C)(1)]

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) report that include the following information for this emissions unit:

a. an identification of each month during which any noncomplying coatings (VOC content exceeded 0.0623 pound of VOC per gallon of coating) were employed, and the actual coating content, in pounds of VOC per gallon of coating for each such coating;

b. an identification of each day during which the average hourly VOC emissions from this emissions unit exceeded 21.0 pounds per hour, and the actual average hourly VOC emissions from this emissions unit for each such day;

c. an identification of each month during which the mass-weighted average VOC emissions exceeded 0.20 kg VOC/kg of coating solids applied, and the actual mass-weighted average VOC emissions, in kg VOC/kg of coating solids, for each such month; and

d. an identification of each month during which the average HAP emissions from coatings exceed 20% of the mass of coating solids applied as described in equation 5 for Hs in section 63.3370(c)(4) of the attached MACT standard, 40 CFR Part 63, Subpart JJJJ and 4% of the mass of coatings, applied as described in section A.III.3.c.ii using equation 4 of HL of section 63.3370(c)(3) of 40 CFR Part 63, Subpart JJJJ.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 02-15512]

2. All deviation (excursion) reports shall be submitted in accordance with section A.1 of the General Terms and Conditions.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 02-15512]

V. Testing Requirements

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

1.a Emission Limitation:

VOC emissions shall not exceed 21.0 pounds per hour from coatings and cleanup materials.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.1 of these terms and conditions.

1.b Emission Limitation:

NOx emissions shall not exceed 1.5 pounds per hour.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor of 100 pounds of NOx per million cubic foot of natural gas input, from AP - 42, July 1998, section 1.4, Natural Gas Combustion, by the maximum hourly gas burning capacity (11,373 cubic foot) of this emissions unit.

1.c Emission Limitation

Ozone emissions shall not exceed 0.62 pound per hour.

Applicable Compliance Method

Compliance shall be demonstrated by multiplying the emission factor of 0.0138 pound of ozone per hour per kW by 15 kW per corona treater, and by 3 corona treaters. The emission factor was determined by the manufacturer's internal stack tests.

1.d Emission Limitation:

The permittee shall not cause the discharge into the atmosphere of more than 0.20 kg of VOC/kg of coating solids applied, calculated as a mass-weighted average for each calendar month.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.2 of these terms and conditions.

1.e Emission Limitation

The permittee shall only employ emulsions (water based coatings) with a maximum VOC content of 0.0623 pound per gallon of coating in this emissions unit.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.1 of these terms and conditions. In accordance with OAC rule 3745-21-04(B)(5), USEPA Method 24 shall be used to determine the VOC content of the coatings or other EPA test method, including SW-846, or any alternative compliance method including formulation data, manufacturer's specifications, or alternative equivalent test methods, if approved by USEPA. In accordance with the USEPA's written approval of February 11, 1998, GCMS, Capillary Column Technique Method 8260A may be used to determine the VOC content of the water-based coatings, pursuant to section 11.4 of Method 24, 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.f Emission Limitation:

The permittee shall not discharge into the atmosphere emissions of more than 20 percent of the mass of HAPs to mass of coating solids applied (0.20 kg HAPs/kg coating solids), calculated as a mass-weighted average for each calendar month.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.3 of these terms and conditions.

1.g Emission Limitation:

The permittee shall not discharge into the atmosphere emissions of more than 4% of the mass of HAPs to the mass of coating, applied (0.04 kg HAPs/kg of coating), calculated as a mass-weighted average for each calendar month.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.3 of these terms and conditions.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

2. USEPA Method 24 or GCMS, Capillary Column Technique Method 8260A shall be used to determine the VOC contents of the cleanup materials employed in this emissions unit, unless otherwise approved by Ohio EPA.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 02-15512]

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: CF-3 Coating Line (K003)

Activity Description: Paper and film coating line

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
K003 - Coating Line CF-3 - paper, film, and other web substrate roll coating line with drying oven, wind and unwind station, and web treatment to coat 100% solid silicones and emulsion topcoats	OAC rule 3745-31-05(A)(3) (PTI 02-18178)	Volatile organic compounds (VOC) emissions from the coating line shall not exceed 27.6 pounds per hour as a daily average, including cleanup, and 121 tons per year. Nitrogen oxides (NOx) emissions from the ovens and web treater shall not exceed 1.40 pounds per hour and 6.2 tons per year. See section A.II.1 below. Carbon monoxide (CO) emissions from the ovens and web treater shall not exceed 1.20 pounds per hour and 5.2 tons per year. See sections A.I.2.a and A.I.2.b below.
	OAC rule 3745-21-09(F)	The VOC content limitation specified by this applicable rule is less stringent than the VOC content limitation established pursuant to 40 CFR Part 60, Subpart RR.
	40 CFR Part 60, Subpart RR	The permittee shall not discharge VOC emissions into the atmosphere of more than 0.20 kg of VOC/kg of coating solids applied, calculated as a mass-weighted average for each month.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	40 CFR Part 63, Subpart JJJJ	The permittee shall not discharge organic HAP emissions into the atmosphere of more than 4 percent of the mass of coating applied or more than 20 percent of the mass of coating solids applied calculated for each month. See Part II, section A.1 and section A.VI.1 below.

2. Additional Terms and Conditions

2.a Only coatings with a maximum VOC content of 0.54 pound per gallon of coating shall be used in this emissions unit.

2.b Silicone and top coat coatings shall not be applied concurrently.

II. Operational Restrictions

1. The permittee shall use low NOx burners in the ovens at all times when this emissions unit is in operation.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI 02-18178]

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:

a. the name and identification number of each coating and cleanup material employed;

b. the VOC content of each coating and cleanup material in pounds per gallon, as applied;

c. the amount of each coating and cleanup material employed, in gallons per day;

d. the total VOC emissions from all coatings and cleanup materials, in pounds and tons per day;

e. the total annual VOC emissions from all coatings and cleanup materials to date, in tons;

f. the total number of hours the emissions unit was in operation; and

g. the daily average hourly VOC emission rate from all coatings and cleanup materials employed, i.e., (d)/(e), in pounds per hour (daily average).

[Authority for Term: OAC rule 3745-77-07(A)(1) and PTI 02-18178]

III. Monitoring and/or Record Keeping Requirements (continued)

2. The permittee shall collect and record the following information each month for this emissions unit:

a. the name and identification number of each coating employed;

b. the weighted average of the mass of solvent (VOC) used per mass of coating solids applied, in kg VOC/kg coating solids applied, calculated in accordance with the equation in section 60.443(a)(2) of 40 CFR Part 60, Subpart RR, and as follows:

i. the weight fraction of VOC and the weight fraction coating solids of each coating applied shall be determined by 40 CFR Part 60, Appendix A, Reference Method 24, or other test method approved by U.S. EPA, or by the coating manufacturer's formulation data, if approved by U.S. EPA;

ii. the weighted average shall be calculated using the following equation:

G = (TWMO) / (TWMS)

where:

G = the calculated weighted average mass (kg) of VOC per mass (kg) of coating solids applied each calendar month;

TWMO = the sum, from i = 1 to i = n, of (Woi x Mci)i;

TWMs = the sum, from i = 1 to i = n, of (Wsi x Mci)i;

i = subscript denoting an individual coating;

n = the number of different coatings employed;

Mci = the total mass (kg) of each coating (i) applied during the calendar month as determined from facility records;

Woi = the weight fraction of volatile organic compounds of each coating (i) applied during the calendar month as determined by Reference Method 24 or other test method approved by U.S. EPA, or by the coating manufacturer's formulation data; and

Wsi = the weight fraction of coating solids of each coating (i) applied during the calendar month as determined by Reference Method 24, or any other test method approved by U.S. EPA. or by the coating manufacturer's formulation data, if approved by U.S. EPA.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 02-18178]

3. The permittee shall collect,record and determine where appropriate the following information each month for this emissions unit:

a. the name and identification number of each coating employed;

b. the average of the mass of HAP emissions per mass of coating solids applied, in kg HAP/kg coating solids applied, calculated in accordance with the equations in section 63.3370(c)(4) of 40 CFR Part 63, Subpart JJJJ, and as follows:

i. the weight fraction of HAP(s) and the weight fraction of coating solids of each coating applied shall be determined by 40 CFR Part 63, Appendix A, Reference Method 311 or 40 CFR Part 60, Appendix A, Reference Method 24, or other test method approved by U.S.EPA, or by the coating manufacturer's formulation data, if approved by U.S. EPA;

ii. the average shall be calculated using equation 5 in Section 63.3370(c)(4) of the attached MACT standard, 40 CFR Part 63, Subpart JJJJ with the following variables:

III. Monitoring and/or Record Keeping Requirements (continued)

where:

Hs = 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;

Chi = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg;

Mi = Mass of as-purchased coating material, i, applied in a month, kg;

q = Number of different materials added to the coating material;

Chij = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg;

Mij = Mass of material, j, added to as-purchased coating material, i, in a month, kg;

Mvret = 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.);

Csi = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg; and

Csij = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass-fraction, kg/kg;

c. the average of the mass of HAP emissions per mass of coating applied, in kg HAP/kg coating applied, calculated in accordance with the equations in section 63.3370(c)(4) of 40 CFR Part 63, Subpart JJJJ, and as follows:

i. the weight fraction of HAP and the weight fraction coating of each coating applied shall be determined by 40 CFR Part 63, Appendix A, Reference Method 311, 40 CFR Part 60, Appendix A, Reference Method 24, or other test method approved by U.S. EPA, or by the coating manufacturer's formulation data, if approved by U.S.EPA;

III. Monitoring and/or Record Keeping Requirements (continued)

ii. the average shall be calculated using equation 4 of Section 63.3370(c)(3) of 40 CFR Part 63, Subpart JJJJ

where:

HL = 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;

Chi = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg;

Mi = Mass of as-purchased coating material, i, applied in a month, kg;

q = Number of different materials added to the coating material;

Chij = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg;

Mij = Mass of material, j, added to as-purchased coating material, i, in a month, kg; and

Mvret = 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.).

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 02-18178]

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that include the following information for this emissions unit:

a. an identification of each day during which any noncomplying coatings where the VOC content exceeded 0.54 pound of VOC per gallon of coating were employed, and the actual VOC content in pounds of VOC per gallon of coating, for each such coating;

b. an identification of each day during which the average hourly VOC emissions exceeded 27.6 pounds per hour, and the actual average hourly VOC emissions, for each such day;

c. an identification of any record indicating that the annual VOC emissions exceeded 121 tons per year, and the actual annual VOC emissions;

d. an identification of each month during which the mass-weighted average VOC emissions from coatings exceeded 0.20 kg VOC/kg of coating solids applied, and the actual mass-weighted average VOC emissions from coatings in kg VOC/kg of coating solids applied, for each such month; and

e. an identification of each month during which the average HAP emissions from coatings exceed 20% of the mass of coating solids applied as described in equation 5 for Hs in section 63.3370(c)(4) of the attached MACT standard, 40 CFR Part 63, Subpart JJJJ and 4% of the mass of coatings, applied as described in section A.III.3.c.ii using equation 4 of HL of section 63.3370(c)(3) of 40 CFR Part 63, Subpart JJJJ.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 02-18178]

V. Testing Requirements

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

1.a Emission Limitation:

Only coatings with a maximum VOC content of 0.54 pound per gallon of coating shall be used in this emissions unit.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.1 of these terms and conditions. In accordance with OAC rule 3745-21-04(B)(5), USEPA Method 24 shall be used to determine the VOC content of the coatings, or other EPA test method, including SW-846 and 8260 A, or any alternative compliance method including formulation data, manufacturer's specifications, alternative equivalent test methods, if approved by USEPA.

1.b Emission Limitation:

VOC emissions from the coating line shall not exceed 27.6 pounds per hour as a daily average, including cleanup, and 121 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.1 of these terms and conditions.

The tpy emission limitation was developed by multiplying the short-term allowable VOC emission limitation (27.6 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.c Emission Limitation:

The permittee shall not discharge VOC emissions into the atmosphere emissions of more than 0.20 kg of VOC/kg of coating solids applied, calculated as a mass-weighted average for each calendar month.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.2 of these terms and conditions.

1.d Emission Limitation:

The permittee shall not discharge organic HAP emissions into the atmosphere emissions of more than 20 percent of the mass of HAPs to mass of coating solids applied (0.20 kg HAPs/kg coating solids), calculated as a mass-weighted average for each calendar month.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.3 of these terms and conditions.

1.e Emission Limitation:

The permittee shall not discharge into the atmosphere emissions of more than 4% of the mass of HAPs to the mass of coating, applied (0.04 kg HAPs/kg of coating), calculated as a mass-weighted average for each calendar month.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.3 of these terms and conditions.

V. Testing Requirements (continued)

1.f Emission Limitation:

NOx emissions from the ovens and web treater shall not exceed 1.40 pounds per hour and 6.2 tons per year.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor of 100 pounds of NOx per million cubic feet of natural gas (EPA AP-42, July 1998, Section 1.4, Natural Gas Combustion) by the maximum hourly natural gas combustion capacity (14,000 ft3/hr) of this emissions unit. If required, emission testing to determine compliance with the above emission limitation shall be performed, using Methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A.

The tpy emission limitation was developed by multiplying the short-term allowable NOx emission limitation (1.40 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.g Emission Limitation:

CO emissions from the ovens and web treater shall not exceed 1.20 pounds per hour and 5.2 tons per year.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor of 84 pounds of CO per million cubic feet of natural gas (EPA AP-42, July 1998, Section 1.4, Natural Gas Combustion) by the maximum hourly natural gas combustion capacity (14,000 ft3/hr) of this emissions unit. If required, emission testing to determine compliance with the above emission limitation shall be performed, using Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A.

The tpy emission limitation was developed by multiplying the short-term allowable CO emission limitation (1.20 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for Term: OAC rule 3745-77-07(C)(1)]

2. USEPA Method 24 or GCMS, Capillary Column Technique Method 8260A shall be used to determine the VOC contents of the coating and cleanup materials employed in this emissions unit, unless otherwise approved by Ohio EPA.

[Authority for Term: OAC rule 3745-77-07(C)(1) and PTI 02-18178]

VI. Miscellaneous Requirements

1. The MACT requirement of this Title V permit concerning the discharge of organic HAP emissions in section A.I.1 related to Applicable Rules/Requirement 40 CFR Part 63, Subpart JJJJ of this permit supercedes the MACT requirement listed in Permit to Install number 02-18178 in section A.I.1 under the same Applicable Rule/Requirement.

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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THIS IS THE LAST PAGE OF THE PERMIT

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Federal Register

Wednesday,
December 4, 2002

Part III

Environmental Protection Agency

40 CFR Part 63

National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating; Final Rules

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[FRL–7385–5]

RIN 2060–AG58

National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action finalizes national emission standards for hazardous air pollutants (NESHAP) for facilities that coat paper and other web substrates and are major sources of hazardous air pollutants (HAP) emissions. The standards implement section 112(d) of the Clean Air Act (CAA) to protect public health and the environment by reducing HAP emissions from new and existing facilities. The CAA requires these sources to achieve the maximum degree of reduction in HAP emissions that is achievable. The final standards will eliminate approximately 80 percent of nationwide HAP emissions from facilities that coat paper and other web substrates.

EFFECTIVE DATE: December 4, 2002. The incorporation by reference of certain publications listed in today's final rule is approved by the Director of the Federal Register as of December 4, 2002.

ADDRESSES: *Docket.* Docket No. A–99–09 contains supporting information used in developing the standards for the paper and other web coating source category. The docket is located at the Environmental Protection Agency, Office of Air & Radiation Docket & Information Center, Mail Code 6102T, 1301 Constitution Avenue, NW, Room B108, Washington, DC 20460, and may be inspected from 8:30 a.m. to 5:30 p.m., Monday through Friday, excluding legal holidays.

FOR FURTHER INFORMATION CONTACT: Mr. Paul Almodovar, Coating and Consumer Products Group (C539–03), Emission Standards Division, U.S. EPA, Research Triangle Park, NC 27711, telephone number (919) 541–0283, facsimile number (919) 541–5689, electronic mail (e-mail) address: *almodovar.paul@epa.gov*.

SUPPLEMENTARY INFORMATION: *Docket.* The docket is an organized and complete file of all the information considered by the EPA in the development of rulemaking. The docket is a dynamic file because material is added throughout the rulemaking process. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the proposed and promulgated standards and their preambles, the contents of the docket will serve as the record in the case of judicial review. (*See* section 307(d)(7)(A) of the CAA.) The regulatory text and other materials related to this rulemaking are available for review in the docket or copies may be mailed on request from the Air and Radiation Docket and Information Center by calling (202) 566–1742. A reasonable fee may be charged for copying docket materials.

WorldWide Web (WWW). In addition to being available in the docket, an electronic copy of today's final rule will also be available on the WWW through the EPA's Technology Transfer Network (TTN). Following signature by the EPA Administrator, a copy of the rule will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at *http://www.epa.gov/ttn/oarpg*. The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541–5384.

Regulated Entities. Categories and entities potentially regulated by this action include those listed on the following table. This table is not intended to be exhaustive, but is just a guide to entities likely to be regulated by these standards. It lists the types of entities that may be regulated, but you should examine the applicability criteria in §§ 63.3290 and 63.3300 of the rule to decide whether your facility is regulated by the standards. If you have any questions about whether your facility is subject to the standards, call the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

CATEGORIES AND ENTITIES POTENTIALLY REGULATED BY THE STANDARDS

Category	NAICS Codes	Examples of Potentially Regulated Entities
Paper and Other Web Coating ..	322211 322212 [a] 322221 322222 [a] 322223 [a] 322224 322225 322226 [a] 322299 323111 323116 325992 326111 326112 [a] 326113 32613 326192 [a] 32791 332999 339944	Those facilities with web coating operations [b] that coat substrate used in products including, but not limited to: corrugated and solid fiber boxes; folding paperboard boxes, including sanitary; flexible packaging (packing paper and plastics film, coated and laminated); pressure sensitive tape and labels, medical tape, duct tape, coated and laminated paper, not elsewhere classified (nec); plastics, foil, and coated paper bags; bags: uncoated paper and multiwall; die-cut paper and board; converted paper and paperboard products, nec (gift wrap, paper wallpaper, cigarette paper); commercial printing, gravure; manifold business forms; plastic aseptic packaging; unsupported plastics film and sheet; laminated plastics plate, sheet, and profile shapes; abrasive products; laminated aluminum (metal) foil and leaf, flexible packaging; photographic equipment and supplies; carbon paper and inked ribbons; linoleum, asphalted-felt base, and other hard surface floor coverings.

[a] Facilities in these NAICS codes are expected to be primarily covered under the printing and publishing NESHAP.

[b] Web coating operations refer to the application of a continuous layer of 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 where the continuous web substrate is flexible enough to be wound or unwound as rolls.

Judicial Review. Under section 307(b) of the CAA, judicial review of the final rule is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit by February 3, 2003. Under section 307(d)(7)(B) of the CAA, only an objection to the rule which was raised with reasonable specificity during the period for public comment can be raised during judicial review. Moreover, under section 307(b)(2) of the CAA, the requirements established by today's final action may not be challenged separately in any civil or criminal proceeding we bring to enforce these requirements.

Outline. The information presented in this preamble is organized as follows:

I. What Are the Subject and Purpose of the Rule?
II. Does This Rule Apply to Me?
A. What Facilities Are Subject to the Rule?
B. What Is the Affected Source?
III. What Are the Emission Standards?
A. Emission Limits
B. Interaction with Other Regulations
IV. When Do I Show Initial Compliance with the Rule?
V. What Testing and Monitoring Must I Do?
A. Test Methods and Procedures
B. Monitoring Requirements
VI. What Notification, Recordkeeping, and Reporting Requirements Must I Follow?
A. Initial Notification
B. Notification of Performance Tests
C. Notification of Compliance Status
D. Recordkeeping Requirements
E. Periodic Reports
VII. What Major Changes Have We Made to the Rule Since Proposal?
A. Applicability
B. New Source Emission Limit
C. Solvent Retained in the Web
D. Monitoring
VIII. What Are the Environmental, Energy, and Economic Impacts of the Rule?
A. Emission Reductions
B. Secondary Environmental Impacts
C. Energy Impacts
D. Cost Impacts
E. Economic Impacts
IX. Administrative Requirements
A. Executive Order 12866, Regulatory Planning and Review
B. Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks
C. Executive Order 13132, Federalism
D. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments
E. Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, and Use
F. Unfunded Mandates Reform Act of 1995
G. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1966 (SBREFA), 5 U.S.C. 601, *et seq.*
H. Paperwork Reduction Act
I. National Technology Transfer and Advancement Act
J. Congressional Review Act

I. What Are the Subject and Purpose of the Rule?

The CAA requires us to establish standards to control HAP emissions from source categories identified under section 112(c) of the CAA. An initial source category list was published in the **Federal Register** on July 16, 1992 (57 FR 31576). The source category list identifies ''Paper and Other Web Coating (Surface Coating)'' as a source category because it contains major sources of HAP emissions. Under the CAA, a major source is defined as ''* * * any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, considering controls, in the aggregate, 10 tons per year (tpy) or more of any one HAP or 25 tpy or more of any combination of HAP.'' We have estimated that there are over 400 existing paper and other web coating facilities with approximately 203 estimated to be major sources of HAP emissions.

The purpose of the rule is to reduce emissions of HAP from paper and other web coating major sources. The source category is for major sources only. Area sources are not included in this source category and, therefore, are not subject to the standards. We estimate that annual baseline organic HAP emissions from this source category are approximately 37,800 megagrams per year (Mg/yr) (42,000 tpy). The final rule will eliminate approximately 31,300 Mg/yr (34,500 tpy) of these organic HAP emissions (about an 80 percent reduction).

The organic HAP emitted from the paper and other web coating process include toluene, methanol, methyl ethyl ketone, xylenes, phenol, methylene chloride, ethylene glycol, glycol ethers, hexane, methyl isobutyl ketone, cresols and cresylic acid, dimethylformamide, vinyl acetate, formaldehyde, and ethyl benzene. These pollutants can cause reversible or irreversible toxic effects following sufficient exposure. The potential toxic effects include eye, nose, throat, and skin irritation, and blood cell, heart, liver, kidney damage, and possibly cancer.

The degree of adverse effects to human health from exposure to HAP can range from mild to severe. The extent and degree to which the human health effects may be experienced are dependent upon (1) the ambient concentration observed in the area (as influenced by emission rates, meteorological conditions, and terrain); (2) the frequency and duration of exposures; (3) characteristics of exposed individuals (genetics, age, preexisting health conditions, and lifestyle) which vary significantly with the population; and (4) pollutant-specific characteristics (toxicity, half-life in the environment, bioaccumulation, and persistence).

II. Does the Rule Apply to Me?

A. What Facilities Are Subject to the Rule?

The paper and other web coating source category includes any facility that is located at a major source and is engaged in the coating of paper, plastic film, metallic foil, and other web surfaces. Paper and other web coating may be simply referred to as ''web coating'' since paper is one of several web substrates in the paper and other web coating source category. The source category does not include printing operations covered under the Printing and Publishing NESHAP (40 CFR part 63, subpart KK) or web coating lines subject to the Magnetic Tape Manufacturing NESHAP (40 CFR part 63, subpart EE). The source category does not include coil coating, *i.e.*, the application of a coating to the surface of any metal strip at least 0.15 millimeter (0.006 inch) thick that is packaged in a roll or coil, which is being regulated as a separate source category. However, we have identified facilities that coat metal webs greater than 0.15 millimeter thick that are coated for use in flexible packaging. These web coating lines are part of the paper and other web coating source category and, therefore, are not subject to the Coil Coating NESHAP. Fabric coating operations are also being regulated as a separate source category, except for fabric coating for use in pressure sensitive tape and abrasive materials.

The rule applies to you if you own or operate any web coating lines at a facility that is a major source of HAP emissions. This means that the web coating lines at a major source would be subject to the standards without regard to the relative proportion of HAP emissions from the web coating lines to total HAP emissions at the source.

If your facility is a nonmajor (area) source, *i.e.*, actual and potential annual emissions are less than 10 tons of any single HAP and less than 25 tons of all HAP combined, you would not be subject to the rule.

If your facility is a major source, you would be required to meet the emission limits for all the web coating lines at your facility. We have defined a web to be a continuous substrate (*e.g.*, paper, plastic film, foil) that is capable of being rolled at any point during the coating

process. We have defined a web coating line to be any number of work stations, of which one or more applies a continuous layer of coating material along the entire width of a continuous web substrate or any portion of the width of the web substrate, and any associated curing/drying equipment between an unwind (or feed) station and a rewind (or cutting) station. As stated before, printing presses subject to the Printing and Publishing NESHAP (40 CFR part 63, subpart KK) are not web coating lines.

B. What Is the Affected Source?

We define an affected source as a stationary source, group of stationary sources, or part of a stationary source to which a specific NESHAP applies. Within a source category, we select the specific emission sources (emission points or groupings of emission points) that will make up the affected source for that category. To select these emission sources, we mainly consider the constituent HAP and quantity emitted from individual or groups of emission points.

For the Paper and Other Web Coating NESHAP, the affected source is the collection of all the web coating lines at a facility. As previously stated, a web coating line is defined as any number of work stations, of which one or more applies a continuous layer of 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.

Affiliated operations such as mixing or dissolving of coating ingredients prior to application; coating mixing for viscosity adjustment, color tint or additive blending, or pH adjustment; cleaning of coating lines and coating line parts; handling and storage of coatings and solvent; and conveyance and treatment of wastewater are part of the paper and other web surface coating source category. The final distinction between these affiliated operations and other activities that go beyond the affiliated operations described above will be resolved in the context of the Miscellaneous Organic Chemical Manufacturing NESHAP or the Miscellaneous Coating Manufacturing NESHAP, both currently under development. Review of the industry survey data reflected that only a small portion of the surveyed facilities reported any data concerning affiliated operations, and only some of these facilities reported that HAP emissions from affiliated operations were controlled. For facilities that reported control of HAP emissions from these sources, the data were not sufficiently detailed to determine if the reported control represented the facility level of control or the control for one unit operation of this type out of several in the facility. For example, mixing may be performed in a mix room and at the application station. It was not clear from the reported data if a facility reporting capture and control of emissions from mixing operations conducted all mixing at controlled application stations or possibly just a single mix room was controlled. When these operations occur inside a permanent total enclosure, emissions reductions can be achieved at the overall control efficiency of the capture and control system. We were not able to identify emissions reductions for affiliated operations with the available data. Since we were not able to identify emissions reductions for affiliated operations, we believe it is not appropriate at this time to include them in the affected source in the final rule.

The requirements of the future Miscellaneous Organic Chemical Manufacturing NESHAP and the Miscellaneous Coating Manufacturing NESHAP will not apply to affiliated operations located at a facility subject to the rule. Activities which go beyond the affiliated operations described above may, however, be subject to the requirements of the Miscellaneous Organic Chemical Manufacturing NESHAP and the Miscellaneous Coating Manufacturing NESHAP. Language will be added to both of these rules to clarify their applicability.

Coating lines and equipment that are not in the source category and thus, not in the affected source, include those that perform both coating and printing and are subject to the national emission standards for the printing and publishing industry (40 CFR part 63, subpart KK); metal coil coating operations, except for the coating of metal webs greater than 0.15 millimeter thick that are used in flexible packaging; and fabric coating operations, except for fabric coating for use in pressure sensitive tape and abrasive materials.

Many industrial facilities perform both coating and printing operations. Within the printing industry, the product and packaging rotogravure and wide-web flexographic industry segment (that includes the flexible packaging industry as a major subsector) does the most coating, with material use distributed almost equally between inks and other types of coatings. Printing operations are covered under the NESHAP for the printing and publishing industry (40 CFR part 63, subpart KK). The Printing and Publishing NESHAP also include an option for facilities that perform both printing and coating to include certain coating operations as affected sources subject to that rule. Therefore, many facilities that could potentially be subject to the Paper and Other Web Coating NESHAP may have coating lines already subject to the Printing and Publishing NESHAP. Such web coating lines included in compliance demonstrations under the Printing and Publishing NESHAP are not subject to the Paper and Other Web Coating NESHAP. A detailed discussion of the printing and publishing industry is included in the background information document for that industry (Docket No. A–92–42, National Emission Standards for Hazardous Air Pollutants: Printing and Publishing Industry—Background Information for Proposed Standards (EPA–453/R–95–002a)).

III. What Are the Emission Standards?

A. Emission Limits

In the rule, we expressed the emission limit in three formats based on whether HAP emissions are measured in terms of mass of organic HAP applied, mass of coating material applied, or mass of coating solids applied. You may choose to comply with any of these formats (referred to as the ''emission limits''). The HAP emission limits are based on emission capture and control technology that can reduce total organic HAP emissions by 95 percent at existing affected sources and 98 percent at new affected sources. The HAP emission limits reflect this level of control by limiting organic HAP emissions to no more than 5 percent and 2 percent of the organic HAP applied each month at existing and new affected sources, respectively; and by equivalently limiting emissions based on the mass of the solids part of your coatings or the mass of your total coating materials. We believe expressing emission limits in this way is appropriately based on the maximum achievable control technology (MACT) level of control and offers flexibility to reduce emissions through the use of control technology, pollution prevention, or a combination of the two.

The three HAP emission limits for existing affected sources are: (1) Limit emissions to no more than 5 percent of the mass of organic HAP applied each month (95 percent reduction); (2) limit the total mass of organic HAP in your coating materials, or the total mass of organic HAP emitted, to no more than 4 mass percent of the total mass of coating materials applied to the web substrate each month; or (3) limit the total mass of organic HAP in your

coatings, or the total mass of organic HAP emitted, to no more than 20 mass percent of the total mass of coating solids applied to web substrates each month.

The three HAP emission limits for new affected sources are: (1) Limit emissions to no more than 2 percent of the mass of organic HAP applied each month (98 percent reduction); (2) limit the total mass of organic HAP in your coating materials, or the total mass of organic HAP emitted, to no more than 1.6 mass percent of the total mass of coating material applied to the web substrate each month; or (3) limit the total mass of organic HAP in your coatings, or the total mass of organic HAP emitted, to no more than 8 mass percent of the total mass of coating solids applied to web substrates each month.

Alternatively, the owners or operators of both existing and new affected sources using a thermal oxidizer to control organic HAP emissions may choose to operate the oxidizer such that an outlet HAP concentration of no greater than 20 parts per million by volume (ppmv) by compound on a dry basis is achieved. If 100 percent capture efficiency is achieved and this outlet concentration is achieved on a continuous basis, then the source will be deemed to be in compliance with the emission limit. Our rationale for including this alternative emission limit is included in section VII.B of this preamble.

If your facility is subject to today's rule, the General Provisions (40 CFR part 63, subpart A) also apply to you. The General Provisions codify procedures and criteria we use to carry out all part 63 NESHAP promulgated under the CAA. The General Provisions contain administrative procedures, preconstruction review procedures, and procedures for conducting compliance-related activities such as notifications, recordkeeping and reporting, performance testing, and monitoring. The rule refers to individual sections of the General Provisions that we believe will be of particular interest to you. However, unless specifically overridden in Table 2 of the rule, all of the General Provisions requirements apply to you.

B. Interaction With Other Regulations

You may be subject to both the Paper and Other Web Coating NESHAP and other future or existing rules, such as new source performance standards (NSPS) and State rules requiring reasonably available control technology limits on volatile organic compounds (VOC) emissions. You must comply with all applicable rules. Duplicative recordkeeping and reporting requirements and differences in emission limitations may be resolved through your title V permit.

IV. When Do I Show Initial Compliance With the Rule?

Existing affected sources must comply with the rule no later than 3 years after December 4, 2002. The effective date is December 4, 2002. New or reconstructed affected sources must comply upon start-up or December 4, 2002, whichever is later. Details of the compliance requirements can be found in the General Provisions, as outlined in Table 1 of today's rule.

Before your initial compliance demonstration, you must choose which of the three emission limit options you will use for your affected source. In your initial compliance certification, you must notify the Administrator of your choice and after that, you must monitor and report compliance results accordingly. If you decide to change to other emission limit options, you are also required to notify the Administrator, as with other changes at the facility, as discussed in section VI of this preamble.

V. What Testing and Monitoring Must I Do?

In addition to the specific testing and monitoring requirements specified below for the affected source, the rule adopts the testing requirements specified in § 63.7 of 40 CFR part 63.

A. Test Methods and Procedures

You may comply with the standards by applying materials meeting the organic HAP emission rate limits, by using capture and control equipment to reduce organic HAP emissions by 95 percent at existing affected sources and by 98 percent at new affected sources, or by using a combination of low-organic-HAP materials and capture and control equipment to meet the organic HAP emission rate limits.

If you demonstrate compliance based on the coating materials applied on your web coating lines, you must determine the organic HAP content of materials applied using either EPA Method 311 of appendix A of 40 CFR part 63, an alternative method for determining the organic HAP content (but only after obtaining EPA approval), or the volatile organic content of the coating materials applied as the value for the organic HAP content. The volatile organic content must be determined by EPA Method 24 of appendix A of 40 CFR part 60 (or an approved alternative method). If you are demonstrating compliance by applying coating materials that meet the emission limit based on coating solids applied, the coating solids content of the materials must be determined using EPA Method 24.

You may rely on formulation data to determine the organic HAP content, volatile matter content, or coating solids content as an alternative to performing Method 311 or Method 24 testing.

To demonstrate compliance, you must calculate the average mass of organic HAP in the coating materials applied on the web coating lines and show that it is less than the organic HAP emission limits specified.

If you use an emission capture and control system to comply with the standards, you must demonstrate that the overall control efficiency reduces total organic HAP emissions by at least 95 percent at existing sources and 98 percent at new sources. Alternatively, you may use capture and control equipment in combination with low-organic-HAP materials and demonstrate you meet one of the other organic HAP emission limits. To comply using this combined approach, you must determine the overall control efficiency of the capture and control equipment and the organic HAP content of the materials applied on the web coating lines. If you choose to demonstrate compliance with the emission limit based on coating solids applied, then you must also determine the coating solids content of each coating material used on the web coating lines. These values must be determined for each monthly period.

To determine the capture system efficiency, you must either confirm that your capture system is a permanent total enclosure using EPA Method 204 of 40 CFR part 51, appendix M, in which case you may assume 100 percent capture; or use EPA Methods 204A through F to measure capture efficiency. You may also use any capture efficiency protocol or test method that satisfies either the data quality objectives or lower confidence limit approach as described in appendix A of 40 CFR part 63, subpart KK.

You must determine the emission destruction or removal efficiency of a control device by conducting a performance test or using a continuous emission monitoring system (CEMS). If you use a CEMS, you must determine the inlet and outlet concentration to calculate the control efficiency. The CEMS must comply with performance specification 8 or 9 in 40 CFR part 60, appendix B.

If you conduct a performance test, the destruction or removal efficiency of a control device must be determined based on three runs, each run lasting 1

hour. Method 1 or 1A of 40 CFR part 60, appendix A, must be used for selection of the sampling sites. Method 2, 2A, 2C, 2D, 2F, or 2G of 40 CFR part 60, appendix A, must be used to determine the gas volumetric flow rate. Method 3, 3A, or 3B of 40 CFR part 60, appendix A, must be used for gas analysis to determine dry molecular weight. Method 4 of 40 CFR part 60, appendix A, must be used to determine stack moisture. Method 25 or 25A of 40 CFR part 60, appendix A, must be used to determine organic volatile matter concentration, although the use of Method 25A is limited as detailed in the rule. Alternatively, any other test method or data that have been validated according to the applicable procedures in Method 301 of 40 CFR part 63, appendix A, may be used if approved by the Administrator.

If you use a solvent recovery system to comply with the requirements of the rule, you may alternatively determine the overall control efficiency using a liquid-liquid material balance. If you demonstrate compliance by using the material balance, you must measure the amount of all coating materials applied during each month to the web coating lines and determine the volatile matter content of these materials. You must also measure the amount of volatile matter recovered by the solvent recovery system during the month and calculate the overall solvent recovery efficiency.

If you so choose, you may also take into account any amount of organic HAP retained in the coated web or otherwise not emitted to the atmosphere, as discussed in section VII.C of this preamble. The final rule requires you to develop a testing protocol for determining the mass of volatile matter retained or otherwise not emitted to the atmosphere. This protocol would have to be submitted and approved as part of your site-specific test plan.

The test methods we require, as discussed above, are existing EPA methods that are familiar to the industry, readily available, and appropriate to the device or the parameter being measured. The selected tests are expected to establish whether the facility is complying with the standards.

B. Monitoring Requirements

According to paragraph (a)(3) of section 114 of the CAA, monitoring of stationary sources is required to determine the compliance status of the sources, and whether compliance is continuous or intermittent. For affected sources complying with the standards by using capture and control systems, initial compliance is determined through an initial performance test and ongoing compliance through continuous monitoring. We specify the operating parameters that need to be monitored for certain control devices used in the paper and other web coating industry (thermal and catalytic oxidizers). You must set the values of these parameters, which demonstrate compliance with the standards, during your initial performance test. These values are your ''operating limits.'' If future monitoring shows that capture and control equipment is operating outside the range of values established during the initial performance test, then you are deviating from the operating limits.

If you use a capture and control system to meet the standards, you are required to develop and maintain a plan identifying the operating limit and monitoring procedures for the capture system. You must monitor in accordance with your plan.

If you use a thermal or catalytic oxidizer to comply with the standards, you must monitor temperature using a continuous parameter monitoring system. If you use a thermal oxidizer to comply with the standards, you must establish the average combustion temperature recorded during the performance test as the operating limit. If you use a catalytic oxidizer to comply with the standards , you must establish as the operating limits the average inlet gas temperature and temperature rise across the catalyst bed recorded during the performance test. Alternatively, you may establish as the operating limits for a catalytic oxidizer the average gas temperature at the inlet of the catalyst bed and the average catalyst activity level.

If you use a solvent recovery system to comply with the emission limits, you must conduct monthly liquid-liquid material balances or operate continuous emission monitors.

VI. What Notification, Recordkeeping, and Reporting Requirements Must I Follow?

The rule requires you to comply with notification, recordkeeping, and reporting requirements, generally as described in the General Provisions (*see* Table 2 of the rule) and specifically as designed to support demonstration of compliance with the rule. We believe that these requirements are necessary and sufficient to ensure that you comply with the requirements in the rule (40 CFR part 63 subpart JJJJ).

A. Initial Notification

If the NESHAP apply to you, you must send an initial notification to the EPA Regional Office in the region where your facility is located and to your State agency. If you have an existing affected source, you must submit the initial notification no later than 1 year before the compliance date, which is December 5, 2005. If you have a new or reconstructed affected source, you must submit the notification no later than 120 days after either the date of initial start-up or December 4, 2002, whichever is later.

The initial notification notifies us and your State agency that you have an existing affected source that is subject to the standards or that you have constructed a new affected source. Thus, it allows you and the Federal or State enforcement agency to plan for compliance activities. The General Provisions specify the information you must include in the initial notification and other reporting requirements for both existing affected sources and new or reconstructed affected sources.

B. Notification of Performance Tests

If the rule applies to you, you will have several options for demonstrating compliance. If you demonstrate compliance by using a capture and control system to reduce HAP emissions, you must conduct a performance test as described in the rule. Prior to conducting the performance test, you must notify us or the delegated State or local agency at least 60 calendar days before the performance test is scheduled to begin, as indicated in the General Provisions.

C. Notification of Compliance Status

You are required to send a notice of compliance status within 180 days after the compliance date as specified in the General Provisions. This report must include your compliance certification, the results of any performance tests and monitoring, and a description of how you will demonstrate continuing compliance.

In conformance with 40 CFR 63.9(h), the notification of compliance status must identify whether low-HAP materials, emission capture and control systems, or a combination of low-HAP materials and capture and control systems were used to comply with the standards. For capture and control systems, it must also identify the operating limits established during the performance test. Specific reporting requirements are dependent upon how you choose to comply with the standards.

D. Recordkeeping Requirements

Records of the organic HAP, volatile organic content and solids content of

each coating applied, and the amount of each coating applied on paper and other web coating lines each month must be maintained to comply with the standards based on organic HAP content or organic HAP emissions on a mass basis.

If capture and control technology is used, you are required to keep records of the equipment monitoring parameter measurements as specified in the final rule. You must also develop a start-up, shutdown, and malfunction plan. You would have to make the plan available for inspection if the Administrator requests to see it. It must stay in your records for the life of the affected source or until the source is no longer required to meet the standards.

E. Periodic Reports

Each reporting year is divided into two semiannual reporting periods. If no deviations occur during a semiannual reporting period, you would submit a semiannual compliance report stating that the affected source has been in compliance. A deviation is any instance in which you fail to meet any requirement or obligation of the standards or any term or condition adopted to meet the standards. The following information would be required in semiannual compliance reports when deviations occur:

- If you are complying by using add-on control devices, report all deviations from the control device operating parameters.
- If you are complying by using solvent recovery systems and liquid-liquid material balance, report material balance calculations for all months when the material balances deviated from the emission limit.
- If you are complying by using add-on controls or solvent recovery systems with continuous emission monitors, report all deviations from the operating parameter values established for the capture system and all deviations from the emission limit.
- If you are complying by using low-HAP coating materials, report all deviations from the emission limit.
- If you are complying by using a combination of capture and control systems with low-HAP coating materials, report all deviations from the emission limit and all deviations from operating parameters described above.

You would also have to send us reports for each semiannual reporting period in which the following occur:

- A change occurs at your facility or within your process that might affect its compliance status.
- A change from what was reported in the initial notice occurs at your facility or within your process.
- You decide to change to another emission limitation option.
- You had a startup, shutdown, or malfunction of an emission control device during the semiannual period and the actions taken were consistent with your startup, shutdown, and malfunction plan (SSMP).

VII. What Major Changes Have We Made to the Rule Since Proposal?

We requested comments from the public on the proposed rule in general, as well as several specific areas. We received 28 comment letters from industry representatives, industry trade groups, and individuals. In response to these comments, we made several changes for the final rule. Many of these changes are clarifications designed to make our intentions clearer. However, some of the changes affect the requirements specified in the proposed rule. The more significant changes to the proposed rule are summarized in the following sections. Our complete responses to public comments for the final rule are contained in the document ''National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Category: Paper and Other Web Coating, Summary of Public Comments and Responses on the Proposed Rule'' (EPA–453/R–02–005).

A. Applicability

Several comments were received on the potential applicability overlap between the proposed rule and other coating standards. The affected source section has been revised to exclude web coating lines subject to the Magnetic Tape Manufacturing NESHAP (40 CFR part 63, subpart EE) and the Printing and Publishing NESHAP (40 CFR part 63, subpart KK) from the requirements of the final rule (40 CFR part 63, subpart JJJJ). The affected source section has also been revised to exclude web coating lines that will be an affected source under the NESHAP for metal coil surface coating operations currently under development. The final rule has been revised to exclude web coating lines that are engaged in the coating of both fabric and other webs on the same fabric coating line and that will be an affected source under the NESHAP for fabric and other textiles printing, coating, and dyeing operations currently under development. Finally, the rule has been revised to clarify that certain web coating lines engaged in fabric coating for use in pressure sensitive tape and abrasive materials are part of the Paper and Other Web Coating source category. While most of these products are commonly produced using a paper web, product applications that require higher performance or unique characteristics may necessitate the use of a fabric web. The coating equipment, the coating solutions, and the emissions are essentially the same whether the coated web is fabric or paper. Therefore, we are regulating these web coating processes under today's final rule.

B. New Source Emission Limit

We received a comment expressing doubt that new sources could consistently achieve 98 percent control efficiency using an oxidizer. The commenter stated that the data we used to develop the new source emission limit were based on short-term performance tests. Over the long term, according to the commenter, oxidizer performance can vary due to coating process variabilities. The commenter requested that we adopt the existing source control efficiency requirement of 95 percent for new sources. While the commenter did not explain what was meant by ''coating process variabilities,'' we assumed that this was a reference to fluctuating organic HAP inlet concentrations during periods of reduced coating application. We recognize that oxidizer performance may decrease when the inlet concentration decreases. While we believe the 98 percent organic HAP overall control efficiency for new sources is achievable based on information provided by the paper and other web coating industry, we added an alternative emission limit based on outlet organic HAP concentration that should account for any variable or low inlet concentrations. The MACT floor analysis for the rule determined that the emission control of the best controlled source in this category was 98 percent. Therefore, we have retained the 98 percent overall control of organic HAP emissions for new affected sources. As stated in the preamble to the proposed rule (65 FR 55339), although some facilities reported more than 98 percent overall control of organic HAP emissions, this higher level of control may not be achievable on a continuous basis under all normal operating conditions applicable to new sources. In order to provide additional flexibility and ensure consistency with other coating-related NESHAP in development, we added an alternate emission limit based on outlet organic HAP concentration. Owners or operators of both existing and new affected sources using a thermal oxidizer to control organic HAP emissions may choose to operate the oxidizer such that

an outlet organic HAP concentration of no greater than 20 ppmv is achieved as long as 100 percent capture efficiency is achieved.

The 20 ppmv by compound organic HAP limit is based on previous EPA studies of available oxidizer technology, cost, and energy use. The dual requirement of meeting a minimum control efficiency value or a 20 ppmv by compound limit accounts for a fall-off of oxidizer efficiency at lower inlet concentrations. For example, if an inlet concentration is only 200 ppmv, even if an outlet concentration of 20 ppmv is achieved, the control efficiency is only 90 percent. This is less than the existing source limit of 95 percent and the new source limit of 98 percent. We recognize this problem for oxidizers with low inlet concentrations and, consequently, have included the alternate 20 ppmv by compound organic HAP emission limit.

Previous EPA studies have shown that new oxidizers can achieve the 20 ppmv by compound emission limit even when the inlet organic HAP concentration is low. We believe that most existing oxidizers could also reach the emission limit with moderate adjustments. The combustion temperature and residence time used in the previous EPA studies to achieve the 20 ppmv by compound emission limit (870 degrees Celsius (1600 degrees Fahrenheit) and 0.75 second) are typical of the necessary operating conditions. We believe these operating conditions are achievable by both new and existing sources.

C. Solvent Retained in the Web

Numerous commenters provided information concerning volatile materials that may be retained in the coated web even after the drying/curing operation. Most of these commenters were concerned that a source using solvent recovery and demonstrating compliance by means of a liquid-liquid material balance would be at a disadvantage because the compliance demonstration procedures in the proposed rule assumed that all volatile materials in the coatings are emitted. Thus, the emissions would be overestimated when volatile material is retained in the coated web. The commenters requested that an ''as-emitted'' compliance option be added to the final rule.

Volatile HAP may be retained in the web due to reactive coatings in which the volatiles are consumed or changed in a chemical reaction during the drying/curing operation, or where a portion of the volatiles is physically retained within the coated web. Volatile HAP may also be recovered from the web coating process and recycled, therefore, not being emitted to the atmosphere. Under the proposed rule, sources using solvent recovery devices and demonstrating compliance through the use of a liquid-liquid material balance would have no means of accounting for the volatile HAP retained in the coated web and not emitted to the atmosphere. Even a small percentage of volatile HAP retained in the coated web would restrict the ability of such a source to comply with the emission limitations in the proposed rule.

In response to these comments, we have added paragraph (g) to § 63.3360, the performance testing section of the final rule. This paragraph allows a source 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. It also requires the source to develop a testing protocol for determining the mass of volatile matter retained or otherwise not emitted to the atmosphere. This protocol would have to be submitted and approved as part of a site-specific test plan. This added paragraph applies to any means of demonstrating compliance, not just liquid-liquid material balances.

In conjunction with the new paragraph in § 63.3360, we revised Equations 4, 5, 6, 7, 8, 12, 14, and 15 of § 63.3370 by adding a term (M_{vret}) to account for volatile matter not emitted from the coating operation. This term may be used to account for reactive coatings, volatile matter chemically bound in the dried coating, incomplete curing, or other situations. These modifications have the same effect as the commenters' request for adding an ''as-emitted'' compliance option.

D. Monitoring

We received numerous comments indicating that the performance specifications (PS) for parameter monitoring of control devices were overly burdensome, particularly the temperature monitor requirements for oxidizers. While we believe the requirements in the proposed rule were appropriate, we have reviewed these requirements and made modifications where continuous compliance assurance will not be compromised. For example, the temperature monitor requirements for oxidizers no longer require monthly inspection of the electrical connections of the temperature monitoring system because we believe the industry adequately performs such monitoring in the absence of specific requirements as part of their routine maintenance. If you wish to monitor an alternative parameter for an oxidizer, or choose to use a control device other than an oxidizer, then you must apply for and receive approval of an alternative monitoring method under § 63.8(f) of the General Provisions. Through this procedure, you have the option of selecting monitoring appropriate to your specific facility that is the most efficient for your needs while still assuring that continuous compliance is maintained.

A related change concerns control devices equipped with an automatic system that shuts down the control device when the temperature falls below the minimum set point. We received comments requesting that hourly averages of temperature readings not be required when such a system is installed. We agree that such a system is an adequate monitor of control device performance and will assure continuous compliance. The final rule specifies that you have the option of using such a system after receiving approval under § 63.8(f) of the General Provisions.

We clarified the minimum data availability requirements for calculating a valid hourly value from continuous monitoring system data, as well as for calculating values for the 3-hour averages derived from the hourly values. These changes were in response to comments indicating that the proposed rule did not clearly indicate what constituted a valid set of data for an hourly reading.

As an alternative to measuring the inlet temperature and temperature rise across the catalyst bed of a catalytic oxidizer to demonstrate continuous compliance, the rule includes a provision that allows you to monitor the temperature at the inlet to the catalyst bed and the catalyst activity level.

The proposed rule did not take into account that some existing facilities may already have CEMS in place. In order to allow such a facility to use the CEMS for compliance purposes, a provision was added to the final rule which allows the use of CEMS to monitor the organic HAP concentration in an exhaust stream from an emission source that is controlled by means other than solvent recovery. However, in order to use the CEMS data for compliance purposes, the emission source must also be operated within a permanent total enclosure.

VIII. What Are the Environmental, Energy, and Economic Impacts of the Rule?

We developed model facilities to represent the paper and other web coating industry based on the data we collected. We estimated environmental, energy, and economic impacts based upon what these modeled facilities must do to meet the rule. There are several options for demonstrating compliance

with these standards, and each facility has flexibility to adopt the compliance option which has the least economic impact for their individual situation. Most of the existing major source facilities in this industry apply solvent-based coatings and utilize thermal oxidation to reduce HAP emissions. Therefore, in estimating the impacts associated with the rule, we assumed that most facilities would install a permanent total enclosure and either install a new thermal oxidizer or upgrade the mechanical components of an existing one. If, instead, a facility complies with the rule by applying coatings that meet the emission limitation, the capital and operating costs and other impacts would be lower than estimated. Hence, the estimates presented below may overestimate the costs and other impacts as some facilities may comply with the rule by applying low-HAP coatings.

A. Emission Reductions

For existing affected sources in the paper and other web coating industry (approximately 203 major sources), the nationwide baseline organic HAP emissions are estimated to be 35,000 Mg/yr (39,000 tpy). We estimate that implementation of the final rule would reduce emissions from existing major sources by approximately 29,000 Mg/yr (32,000 tpy), or approximately 80 percent.

We have projected the growth of the paper and other web coating industry and anticipate that 32 new affected sources (individual facilities with one or more web coating lines) will be constructed over the next 5 years. In the absence of this rule, these new sources would be required to comply with the NSPS in 40 CFR part 60 for VOC. Because nearly all the VOC used by the paper and other web coating industry are also organic HAP, the NSPS would reduce organic HAP emissions as well as VOC emissions. Based on the analysis performed to develop model plants to assess the impacts of the proposed rule on the industry, it was determined that the NSPS represents a 90 percent reduction of organic HAP emissions. Therefore, this level of control was used to estimate the baseline organic HAP emissions for new sources (*i.e.*, the level of emissions from new sources in the absence of this rule). We estimated that nationwide organic HAP baseline emissions from new sources will be about 2,800 Mg/yr (3,000 tpy). We estimate that implementation of the final rule will reduce emissions from new affected sources by about 2,300 Mg/yr (2,535 tpy), or approximately 80 percent.

B. Secondary Environmental Impacts

Secondary environmental impacts are considered to be any air, water, or solid waste impacts, positive or negative, associated with the implementation of the final standards. These impacts are exclusive of the direct organic HAP air emissions reductions discussed in the previous section.

We estimate that more than 99 percent of the organic HAP emissions from paper and other web coating are VOC. Therefore, the capture and control of organic HAP that are presently emitted will result in a decrease in VOC emissions. Consequently, we estimate the current nationwide VOC emissions from the paper and other web coating source category to be at least 35,000 mg/yr (39,000 tpy), the nationwide organic HAP estimate. The emission controls for organic HAP will reduce non-HAP VOC emissions as well.

Emissions of VOC have been associated with a variety of health and welfare impacts. The VOC emissions, together with nitrogen oxides, are precursors to the formation of ground-level ozone, or smog. Exposure to ambient ozone is responsible for a series of public health impacts, such as alterations in lung capacity and aggravation of existing respiratory disease. Ozone exposure can also damage forests and crops.

The use of newly installed or upgraded control devices to meet the standards would result in greater electricity consumption. Increases in emissions of nitrogen oxides, sulfur dioxide, carbon monoxide, and carbon dioxide, as well as certain HAP, from electric utilities could result. The operation of newly installed or upgraded control devices would also require combustion of supplemental fuel, typically natural gas, resulting in additional emissions of nitrogen oxides, carbon monoxide, and carbon dioxide.

It is expected that some paper and other web coating facilities will comply with the standards by substituting non-HAP materials for organic HAP presently in use. In some cases, the non-HAP materials may be VOC, however, in other cases, non-VOC materials (*e.g.*, water) may be used. Facilities converting to waterborne materials as a means or partial means of compliance may have reduced Resource Conservation and Recovery Act hazardous waste disposal if the status of the waste material changes from hazardous to nonhazardous. An increase in wastewater discharge may then occur if this waste material and waterborne wash up materials are discharged to publicly owned treatment works. However, we do not expect any significant increases in wastewater discharge to result from the standards.

New and upgraded catalytic oxidizers will require catalysts. Catalyst life is estimated to be more than 10 years. Spent catalysts will represent a small amount of solid waste, and sometimes the spent catalyst will be regenerated by the manufacturer for reuse. Activated carbon used in solvent recovery systems is typically returned to the manufacturer at the end of its useful life and converted to other products. Little solid waste impact is expected from this.

C. Energy Impacts

The operation of new and upgraded control devices will require additional energy. Capture of previously uncontrolled solvent-laden air will require fan horsepower. Operation of oxidizers, particularly thermal oxidizers, may require supplemental fuel (typically natural gas) to increase the combustion temperature and improve destruction efficiency.

The total additional electrical energy required to meet the standards is estimated to be 313 million kilowatt-hours per year. Additional fuel requirements total 3.7 billion British thermal units per year. These fuel impacts are based on the use of thermal oxidizers at all facilities, which is the control scenario expected to result in the highest energy impacts.

D. Cost Impacts

The total nationwide capital and annualized costs (1998 dollars) attributable to compliance with the standards have been estimated for existing and new affected sources. Costs are based on the use of permanent total enclosures, thermal oxidizers, and monitoring equipment (*i.e.*, CEMS for solvent recovery systems). The capital costs with other methods of control (*e.g.*, applying low-HAP coatings) are expected to be significantly lower.

It is expected that any new facility using solvent-based coatings will install control systems to comply with applicable State and Federal regulations for reducing VOC emissions from this source category (*e.g.*, the standards of performance for new stationary sources in 40 CFR part 60). The data we gathered on this industry indicate that thermal oxidation is the most common control technology installed to meet the requirements of these existing State and Federal regulations. Thermal oxidation is capable of achieving a 98 percent reduction of HAP emissions. Therefore, the additional costs to a new facility resulting from the standards were estimated based on the costs of

constructing a permanent total enclosure to deliver all HAP emissions to the existing thermal oxidizer.

Capital costs would be incurred by installing capture and control systems at existing facilities presently without capture and control systems, and upgrading capture and control systems at existing facilities that do not meet the standards. Additionally, we estimated the cost for the purchase of monitoring equipment needed as a capital investment to meet the monitoring, recordkeeping, and reporting requirements of the standards. Total nationwide capital costs are estimated to be $222 million with the cost for existing sources and new sources estimated to be $204 million and $18 million, respectively.

Total nationwide annualized costs of the standards have been estimated at $69 million with the annualized cost for existing and new sources estimated to be $64 million and $5 million, respectively. These costs include capital recovery over a 10-year period, operating costs for the newly installed and upgraded capture and control systems, and costs for monitoring, recordkeeping, and reporting. These are net costs after taking into account the costs presently being incurred for the baseline control level.

E. Economic Impacts

The economic impact analysis (EIA) shows that the expected price increases for affected output would range from only 0.1 to 1.1 percent as a result of the standards. The expected change in production of affected output is a reduction of 0.1 to 1.1 percent as a result of the standards. The economic impact analysis predicts three plant closures among the facilities included in the analysis. Although any facility closure is cause for concern, it should be noted that the baseline economic condition of the facilities predicted to close affects the closure estimate provided by the economic model. Facilities which are already experiencing adverse economic conditions for reasons unconnected to the final rule are more vulnerable to the impact of any new costs than those that are not. The facilities predicted to close appear to currently have low profitability levels. While the final rule may adversely impact the three facilities predicted to close, we do not predict an adverse economic impact to the industry as a whole.

IX. Administrative Requirements

A. Executive Order 12866, Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), EPA must determine whether the regulatory action is ''significant'' and therefore subject to review by the Office of Management and Budget (OMB) and the requirements of the Executive Order. The Executive Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligation of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

It has been determined that this rule is not a ''significant regulatory action'' under the terms of Executive Order 12866 and is therefore not subject to OMB review.

B. Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the EPA must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. This rule is not subject to Executive Order 13045 because it is based on technology performance and not on an assessment of health or safety risks. Furthermore, the rule has been determined not to be ''economically significant'' as defined under Executive Order 12866.

C. Executive Order 13132, Federalism

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' are defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.''

The final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. Thus, Executive Order 13132 does not apply to the rule. Although section 6 of Executive Order 13132 does not apply to the rule, EPA did consult with State and local officials to enable them to provide timely input in the development of the rule.

D. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.'' The final rule does not have tribal implications, as specified in Executive Order 13175. No tribal governments own or operate paper and other web coating lines. Thus, Executive Order 13175 does not apply to the rule.

E. Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, and Use

The final rule is not subject to Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

F. Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public

Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that the rule does not contain a Federal mandate that may result in expenditures of $100 million or more to State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. The maximum total annual cost of the rule for any year has been estimated to be about $69 million. Thus, today's rule is not subject to the requirements of sections 202 and 205 of the UMRA. In addition, EPA has determined that the standards contains no regulatory requirements that might significantly or uniquely affect small governments because it contains no requirements that apply to such governments or impose obligations upon them. Therefore, today's rule is not subject to the requirements of section 203 of the UMRA.

G. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1966 (SBREFA), 5 U.S.C. 601, et seq.

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with the final rule. For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business ranging from 500 to 750 employees, according to Small Business Administration size standards established under the NAICS for the industries affected by today's rule; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, EPA has concluded that this action will not have a significant impact on a substantial number of small entities. We have determined that 50 of the 103 companies owning affected facilities are small businesses. Although small businesses represent 49 percent of the companies within the source category, they are expected to incur 25 percent of the total industry compliance costs of $64 million. There are six small firms with compliance costs equal to or greater than 3 percent of their sales. In addition, there are four small firms with cost-to-sales ratios between 1 and 3 percent.

We performed an EIA to estimate the changes in product price and production quantities for the firms affected by the final rule. The analysis shows that of the 54 facilities owned by affected small firms, one would be expected to shut down rather than incur the cost of compliance with the final rule. Although any facility closure is cause for concern, it should be noted that the baseline economic condition of the facility predicted to close affects the closure estimate provided by the economic model. Facilities which are already experiencing adverse economic conditions for reasons unconnected to the rule are more vulnerable to the impact of any new costs than those that are not. The facility predicted to close appears to have low profitability levels currently. The EPA also notes that, while economies of scale will require individual small firms to pay a somewhat higher proportion of revenues than large firms for compliance, the burden on most small firms is quite low nevertheless. The median compliance cost is well below 1 percent of sales for both small and large firms affected by these standards (0.16 and 0.03 percent of sales for small and large firms, respectively).

In summary, while a few small firms may experience significant impacts, there will not be a substantial number incurring such a burden. For more information, consult the docket for this project.

H. Paperwork Reduction Act

The information collection requirements in the rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501, *et seq.* An Information Collection Request (ICR) document has been prepared by EPA (ICR No. 1951.02) and a copy may be obtained from Susan Auby by mail at the Collection Strategies Division (2822T), U.S. EPA, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, by e-mail at *auby.susan@epa.gov,* or by calling (202) 566–1672. A copy may also be downloaded off the internet at *http://www.epa.gov/icr.* The information requirements are not effective until OMB approves them.

The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to national emission standards. These recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to Agency policies set forth in 40 CFR part 2, subpart B.

The annual monitoring, recordkeeping, and reporting burden for this collection (averaged over the first 3 years after the effective date of the rule) for existing web coating facilities is estimated to be 38,708 labor hours at a total annual cost of $2,914,796. For new sources, the annual burden for the same 3-year period is estimated to be 2,754 labor hours at a total annual cost of $206,283. This estimate covers all monitoring, recordkeeping, and reporting activities, including a one-time submission of a SSMP with semiannual reports for any event when the procedures in the plan were not followed; semiannual compliance reports; notifications; and recordkeeping. The total annual capital/startup cost component (including purchase of services component) for

existing sources over the 3-year period is estimated to be $2,015,800. The annual operation and maintenance costs component for existing sources is estimated to be $649,779. For new sources, the estimated annual capital/startup cost component is $233,500 and the estimated annual operation and maintenance cost component is $28,520. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR, chapter 15. The OMB control number for the information collection requirements in this rule will be listed in an amendment to 40 CFR part 9 in a subsequent **Federal Register** document after OMB approves the ICR.

I. National Technology Transfer and Advancement Act

As noted in the proposed rule, section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104–113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. The VCS are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by VCS bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable VCS.

The final rule involves technical standards. The EPA cites the following standards: EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 3, 3A, 3B, 4, 24, 25, 25A, 204, 204A through F, and 311; and PS 6, 8, and 9. Consistent with the NTTAA, EPA conducted searches to identify VCS in addition to these EPA methods/PS. No applicable VCS were identified for EPA Methods 1A, 2A, 2D, 2F, 2G, 204, 204A through F, and 311, and PS 6, 8, and 9. The search and review results have been documented and are placed in docket A–99–09 for the rule.

The VCS described below was identified as an acceptable alternative to EPA test methods for the purposes of the rule.

The VCS ANSI/ASME PTC 19.10–1981, ''Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus],'' is cited in the rule for its manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas. This part of ASME PTC 19.10–1981–Part 10 is an acceptable alternative to Method 3B.

Six VCS are already incorporated by reference (IBR) in EPA Method 24: ASTM D1475–90, ASTM D2369–95, ASTM D3792–91, ASTM D4017–96a, ASTM D4457–85 (Reapproved 1991), and ASTM D5403–93. Five VCS are IBR in EPA Method 311: ASTM D1979–91, ASTM D3432–89, ASTM D4747–87, ASTM D4827–93, and ASTM PS9–94.

In addition to the VCS EPA uses in the rule, the search for emissions measurement procedures identified 14 other VCS. The EPA determined that 11 of these 14 standards identified for measuring emissions of the HAP or surrogates subject to emission standards in the rule were impractical alternatives to EPA test methods for the purposes of the rule. Therefore, EPA does not intend to adopt these standards for this purpose. Three of the 14 VCS identified in this search were not available at the time the review was conducted for the purposes of the final rule.

The VCS ASTM D3154–00, ''Standard Method for Average Velocity in a Duct (Pitot Tube Method),'' is impractical as an alternative to EPA Methods 1, 2, 2C, 3, 3B, and 4 for the purposes of the final rule since the standard appears to lack in quality control and quality assurance requirements. Specifically, ASTM D3154–00 does not include the following: (1) Proof that openings of standard pitot tube have not plugged during the test; (2) if differential pressure gauges other than inclined manometers (*e.g.*, magnehelic gauges) are used, their calibration must be checked after each test series; and (3) the frequency and validity range for calibration of the temperature sensors.

The VCS ASTM D3464–96 (2001), ''Standard Test Method Average Velocity in a Duct Using a Thermal Anemometer,'' is impractical as an alternative to EPA Method 2 for the purposes of the final rule primarily because applicability specifications are not clearly defined, *e.g.*, range of gas composition, temperature limits. Also, the lack of supporting quality assurance data for the calibration procedures and specifications, and certain variability issues that are not adequately addressed by the standard limit EPA's ability to make a definitive comparison of the method in these areas.

The VCS ISO 10780:1994, ''Stationary Source Emissions–Measurement of Velocity and Volume Flowrate of Gas Streams in Ducts,'' is impractical as an alternative to EPA Method 2 in the final rule. The standard recommends the use of an L-shaped pitot which historically has not been recommended by EPA. The EPA specifies the S-type design which has large openings that are less likely to plug up with dust.

The VCS CAN/CSA Z223.2–M86(1986), ''Method for the Continuous Measurement of Oxygen, Carbon Dioxide, Carbon Monoxide, Sulphur Dioxide, and Oxides of Nitrogen in Enclosed Combustion Flue Gas Streams,'' is unacceptable as a substitute for EPA Method 3A since it does not include quantitative specifications for measurement system performance, most notably the calibration procedures and instrument performance characteristics. The instrument performance characteristics that are provided are nonmandatory and also do not provide the same level of quality assurance as the EPA methods. For example, the zero and span/calibration drift is only checked weekly, whereas the EPA methods require drift checks after each run.

Two very similar standards, ASTM D5835–95, ''Standard Practice for Sampling Stationary Source Emissions for Automated Determination of Gas Concentration,'' and ISO 10396:1993, ''Stationary Source Emissions: Sampling for the Automated Determination of Gas Concentrations,'' are impractical alternatives to EPA Method 3A for the purposes of the final rule because they lack in detail and quality assurance/quality control requirements. Specifically, these two standards do not include the following: (1) Sensitivity of the method; (2) acceptable levels of analyzer calibration error; (3) acceptable levels of sampling system bias; (4) zero drift and calibration drift limits, time span, and required testing frequency; (5) a method to test the interference response of the analyzer; (6) procedures to determine the minimum sampling time per run and minimum measurement time; and (7) specifications for data recorders in terms of resolution (all types) and recording intervals (digital and analog recorders, only).

The VCS ISO 12039:2001, ''Stationary Source Emissions—Determination of Carbon Monoxide, Carbon Dioxide, and Oxygen—Automated Methods,'' is not acceptable as an alternative to EPA Method 3A. This ISO standard is similar to EPA Method 3A, but is missing some key features. In terms of sampling, the hardware required by ISO 12039:2001 does not include a 3-way calibration valve assembly or equivalent to block the sample gas flow while calibration gases are introduced. In its calibration procedures, ISO 12039:2001 only specifies a two-point calibration while EPA Method 3A specifies a three-point calibration. Also, ISO 12039:2001 does not specify performance criteria for calibration error, calibration drift, or sampling system bias tests as in the EPA method, although checks of these quality control features are required by the ISO standard.

The VCS ISO 11890–1 (2000) part 1, ''Paints and Varnishes—Determination of Volatile Organic Compound (VOC) Content-Difference Method,'' is impractical as an alternative to EPA Method 24 because measured nonvolatile matter content can vary with experimental factors such as temperature, length of heating period, size of weighing dish, and size of sample. The standard ISO 11890–1 allows for different dish weights and sample sizes than the one size (58 millimeters in diameter and sample size of 0.5 gram) of EPA Method 24. The standard ISO 11890–1 also allows for different oven temperatures and heating times depending on the type of coating, whereas EPA Method 24 requires 60 minutes heating at 110 degrees Celcius at all times. Because the EPA Method 24 test conditions and procedures ''define'' volatile matter, ISO 11890–1 is unacceptable as an alternative because of its different test conditions.

The VCS ISO 11890–2 (2000) part 2, ''Paints and Varnishes—Determination of Volatile Organic Compound (VOC) Content-Gas Chromatographic Method,'' is impractical as an alternative to EPA Method 24 because ISO 11890–2 only measures the VOC added to the coating and would not measure any VOC generated from the curing of the coating. The EPA Method 24 does measure ''cure'' VOC which can be significant in some cases and, therefore, ISO 11890–2 is not an acceptable alternative to this EPA method.

Two VCS, EN 12619:1999 ''Stationary Source Emissions—Determination of the Mass Concentration of Total Gaseous Organic Carbon at Low Concentrations in Flue Gases—Continuous Flame Ionization Detector Method'' and ISO 14965:2000(E) ''Air Quality-Determination of Total Nonmethane Organic Compounds—Cryogenic Preconcentration and Direct Flame Ionization Method,'' are impractical alternatives to EPA Method 25 and 25A for the purposes of the final rule because the standards do not apply to solvent process vapors in concentrations greater than 40 parts per million (ppm) (EN 12619) and 10 ppm carbon (ISO 14965). Methods whose upper limits are this low are too limited to be useful in measuring source emissions, which are expected to be much higher.

Three of the 14 VCS identified in this search were not available at the time the review was conducted for the purposes of the final rule because they are under development by a VCS body: ASME/BSR MFC 13M, ''Flow Measurement by Velocity Traverse,'' for EPA Method 2 (and possibly 1); ASME/BSR MFC 12M, ''Flow in Closed Conduits Using Multiport Averaging Pitot Primary Flowmeters,'' for EPA Method 2; and ISO/CD 17895, ''Paints and Varnishes-Determination of the Volatile Organic Compound Content of Water-based Emulsion Paints,'' for EPA Method 24.

Sections 63.3320 and 63.3360 of the final rule list the EPA testing methods and PS included in the final rule. Under §§ 63.7(f) and 63.8(f) of subpart A of the General Provisions, a source may apply to EPA for permission to use alternative test methods or alternative monitoring requirements in place of any of the EPA testing methods, PS, or procedures.

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801, *et seq.*, as added by the SBREFA, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing the rule and other required information to the United States Senate, the United States House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register.** This action is not a ''major rule'' as defined by 5 U.S.C. 804(2). The rule will be effective December 4, 2002.

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Hazardous substances, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: November 8, 2002.

Christine T. Whitman,

Administrator.

For reasons set out in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

PART 63—[AMENDED]

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C., 7401, *et seq.*

2. Part 63 is amended by revising § 63.14(i). The revision reads as follows:

§ 63.14 Incorporations by reference.

* * * * *

(i) The following material is available for purchase from at least one of the following addresses: ASME International, Orders/Inquiries, P.O. Box 2300, Fairfield, NJ 07007–2300; or Global Engineering Documents, Sales Department, 15 Inverness Way East, Englewood, CO 80112: ANSI/ASME PTC 19.10–1981, ''Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus],'' IBR approved for § 63.3360(e)(1)(iii), § 63.4166(a)(3), and § 63.5160(d)(1)(iii).

* * * * *

3. Part 63 is amended by adding subpart JJJJ to read as follows:

Subpart JJJJ—National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating

Sec.

What This Subpart Covers

63.3280 What is in this subpart?
63.3290 Does this subpart apply to me?
63.3300 Which of my emission sources are affected by this subpart?
63.3310 What definitions are used in this subpart?

Emission Standards and Compliance Dates

63.3320 What emission standards must I meet?
63.3321 What operating limits must I meet?
63.3330 When must I comply?

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?
63.3350 If I use a control device to comply with the emission standards what monitoring must I do?
63.3360 What performance tests must I conduct?

Requirements for Showing Compliance

63.3370 How do I demonstrate compliance with the emission standards?

Notifications, Reports, and Records

63.3400 What notifications and reports must I submit?
63.3410 What records must I keep?

Delegation of Authority

63.3420 What authorities may be delegated to the States?

Tables to Subpart JJJJ of Part 63

Table 1 to Subpart JJJJ of Part 63. Operating Limits if Using Add-On Control Devices and Capture System
Table 2 to Subpart JJJJ of Part 63. Applicability of 40 CFR Part 63 General Provisions to Subpart JJJJ

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 coating equipment under subpart KK of this part (national emission standards 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 (national emission standards 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 (national emission standards for magnetic tape manufacturing operations).

(e) Any web coating line that will be subject to the national emission standards for hazardous air pollutants (NESHAP) for surface coating of metal coil currently under development.

(f) Any web coating line that will be subject to the NESHAP for the printing, coating, and dyeing of fabric and other textiles currently under development. This would include 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.

§ 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 inks, varnishes, adhesives, primers, solvents, reducers, and other coating materials applied to a substrate via a web coating line. Materials used to form a substrate 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 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.

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.

(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) by compound 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.

§ 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, 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, 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).

§ 63.3330 When must I comply?

(a) If you own or operate an existing affected source subject to the provisions of this subpart, you must comply by the compliance date. The compliance date for existing affected sources in this subpart is December 5, 2005. You must complete any performance test required in § 63.3360 within the time limits specified in § 63.7(a)(2).

(b) If you own or operate a new affected source subject to the provisions of this subpart, your compliance date is immediately upon start-up of the new affected source or by December 4, 2002, whichever is later. You must complete any performance test required in § 63.3360 within the time limits specified in § 63.7(a)(2).

(c) If you own or operate a reconstructed affected source subject to the provisions of this subpart, your compliance date is immediately upon startup of the affected source or by December 4, 2002, whichever is later. 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. You must

complete any performance test required in § 63.3360 within the time limits specified in § 63.7(a)(2).

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?

Table 2 to this subpart specifies the provisions of subpart A of this part that apply if you are subject to this subpart, such as startup, shutdown, and malfunction plans (SSMP) in § 63.6(e)(3) for affected sources using a control device to comply with the emission standards.

§ 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 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(n) and (o). 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 during which the process is operated.

(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)(9) and (10) and (f) of this section according to the requirements in paragraphs (e)(1) through (8) of this section. You must install, operate, and maintain each CPMS specified in paragraph (c) of this section according to paragraphs (e)(5) through (7) 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 during which 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 rolling 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) You must record the results of each inspection, calibration, and validation check of the CPMS.

(6) 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.

(7) 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.

(8) 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).

(9) *Oxidizer.* If you are using an oxidizer to comply with the emission standards, you must comply with paragraphs (e)(9)(i) through (iii) of this section.

(i) Install, calibrate, maintain, and operate temperature monitoring equipment according to the manufacturer's specifications. The calibration of the chart recorder, data logger, or temperature indicator must be verified every 3 months or the chart recorder, data logger, or temperature indicator must be replaced. You must replace the equipment whether you choose not to perform the calibration or the equipment cannot be calibrated properly.

(ii) For an oxidizer other than a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device must have an accuracy of ±1 percent of the temperature being monitored in degrees Celsius, or ±1° Celsius, whichever is greater. The thermocouple or temperature sensor must be installed in the combustion chamber at a location in the combustion zone.

(iii) For a catalytic oxidizer, install, calibrate, 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 Celsius or ± 1 degree Celsius, whichever is greater. The thermocouple or 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.

(10) *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.

§ 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 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 § 63.3360(c) and (d). 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).

If you control organic HAP on any individual web coating line or any group of web coating lines by:	You must:
(2) Using a capture and control system.	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).

(b) 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 monitors for determining inlet and outlet total organic volatile matter concentration 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 continuous emission monitors 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 29 CFR 1910.1200(d)(4) 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 40 CFR part 60, appendix A. The Method 24 determination may be performed by the manufacturer of the coating and the results provided to you.

(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 of 40 CFR part 63) 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 29 CFR 1910.1200(d)(4) 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 1a 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 (40 CFR part 60, appendix A.) The Method 24 determination may be performed by the manufacturer of the material and the results provided to you. If these values cannot be determined using Method 24, 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 40 CFR part 60, appendix A, 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 1b of § 63.3370 and the as-applied coating solids content must be calculated using Equation 2 of § 63.3370.

(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) An initial performance test to establish the destruction or removal efficiency of the control device 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 40 CFR part 60, appendix A, must be used for sample and velocity traverses to determine sampling locations.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G of 40 CFR part 60, appendix A, must be used to determine gas volumetric flow rate.

(iii) Method 3, 3A, or 3B of 40 CFR part 60, appendix A, 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, ''Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus],'' (incorporated by reference, see § 63.14).

(iv) Method 4 of 40 CFR part 60, appendix A, must be used to determine stack gas moisture.

(v) The gas volumetric flow rate, dry molecular weight, and stack gas moisture must be determined during each test run specified in paragraph (f)(1)(vii) of this section.

(vi) Method 25 or 25A of 40 CFR part 60, appendix A, must be used to determine total gaseous non-methane 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 of this section:

$$M_f = Q_{sd} C_c [12][0.0416]\left[10^{-6}\right] \quad \text{Eq. 1}$$

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 § 63.3360(e)(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/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 of this section:

$$E = \frac{M_{fi} - M_{fo}}{M_{fi}} \times 100 \quad \text{Eq. 2}$$

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 of this section.

(2) You must record such process information as may be necessary to determine the conditions in existence at the time of the performance test. Operations during periods of startup, shutdown, and malfunction will not constitute representative conditions for the purpose of a performance test.

(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. This average combustion temperature is the minimum operating limit for your thermal oxidizer.

(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. These are the minimum operating limits for your catalytic oxidizer.

(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. This is the minimum operating limit for your catalytic oxidizer.

(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.

(f) *Capture efficiency.* If you demonstrate compliance by meeting the requirements of § 63.3370(e), (f), (g), (h), (i)(2), (k), (n)(2) or (3), or (p), 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 testing protocol to determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere and submit this protocol to the Administrator for approval. You must submit this protocol with your site-specific test plan under § 63.7(f). If you intend 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 and demonstrate compliance according to § 63.3370(c)(3), (c)(4), (c)(5), or (d), then the test protocol you submit must determine the mass of organic HAP retained in the coated web or otherwise not emitted to the atmosphere. Otherwise, compliance must be shown using the volatile organic matter content as a surrogate for the HAP content of the coatings.

(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.

Requirements for Showing Compliance

§ 63.3370 How do I demonstrate compliance with the emission standards?

(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).
(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 1a or b of § 63.3370 to determine compliance with § 63.3320(b)(2) in accordance with § 63.3370(c)(5)(i).

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
	(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 2 and 3 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 4 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 5 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 6 of § 63.3370) is less than the calculated equivalent allowable organic HAP (Equation 13a or b of § 63.3370).
(4) 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 by compound and capture efficiency is 100 percent; or operating parameters are continuously monitored; or.	Follow the procedures set out in § 63.3370(e) to determine compliance with § 63.3320(b)(1) according to § 63.3370(i) if using a solvent recovery device, or § 63.3370(j) if using a control device and CPMS, or § 63.3370(k) if using an oxidizer.
	(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(f) to determine compliance with § 63.3320(b)(3) according to § 63.3370(i) if using a solvent recovery device, or § 63.3370(k) 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(g) to determine compliance with § 63.3320(b)(2) according to § 63.3370(i) if using a solvent recovery device, or § 63.3370(k) 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(h). Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 13a or b of § 63.3370). Calculate the monthly organic HAP emission rate according to § 63.3370(i) if using a solvent recovery device, or § 63.3370(k) if using an oxidizer.
(5) 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(e) to determine compliance with § 63.3320(b)(1) according to § 63.3370(e)(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(f) to determine compliance with § 63.3320(b)(3) according to § 63.3370(n).
	(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(g) to determine compliance with § 63.3320(b)(2) according to § 63.3370(n).

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
	(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(h). Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 13a or b of § 63.3370) according to § 63.3370(n).
(6) 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(f) to determine compliance with § 63.3320(b)(3) according to § 63.3370(n).
	(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(g) to determine compliance with § 63.3320(b)(2) according to § 63.3370(n).
	(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(h). Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 13a or b of § 63.3370) according to § 63.3370(n).

(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 1a of this section:

$$C_{ahi} = \frac{\left(C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq. 1a}$$

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.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

or calculate the as-applied volatile organic content of each coating material using Equation 1b of this section:

$$C_{avi} = \frac{\left(C_{vi}M_i + \sum_{j=1}^{q} C_{vij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq. 1b}$$

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 2 of this section:

$$C_{asi} = \frac{\left(C_{si}M_i + \sum_{j=1}^{q} C_{sij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq. 2}$$

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 3 of this section:

$$H_{si} = \frac{C_{ahi}}{C_{asi}} \qquad \text{Eq. 3}$$

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 4 of this section:

$$H_L = \frac{\sum_{i=1}^{p} C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij} - M_{vret}}{\sum_{i=1}^{p} M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq. 4}$$

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 5 of this section:

$$H_S = \frac{\sum_{i=1}^{p} C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij} - M_{vret}}{\sum_{i=1}^{p} C_{Si}M_i + \sum_{j=1}^{q} C_{Sij}M_{ij}} \qquad \text{Eq. 5}$$

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 6 of this section is less than the calculated equivalent allowable organic HAP as determined by Equation 13a or b in paragraph (l) of this section:

$$H_m = \sum_{i=1}^{p} C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij} - M_{vret} \qquad \text{Eq. 6}$$

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) *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 by compound 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 (e)(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 (k) 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 (j) 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 (n) or (p) 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 (n) 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 by compound on a dry basis. If this method is selected, you must demonstrate compliance by following the procedures in paragraphs (e)(3)(i) and (ii) of this section. Compliance is determined according to paragraph (e)(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 (e)(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 (i)(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 by compound on a dry basis.

(f) *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 (n) of this section. Otherwise, you must demonstrate compliance following 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 (k) of this section when emissions are controlled by an oxidizer.

(g) *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 (n) of this section. Otherwise, you must demonstrate compliance following 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 (k) of this section when emissions are controlled by an oxidizer.

(h) *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 (l) 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 (n) of this section. Otherwise, the owner or operator must demonstrate compliance following 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 (k) of this section when emissions are controlled by an oxidizer.

(i) *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 (i)(1) or (2) of this section:

(1) *Liquid-liquid material balance.* Perform a monthly liquid-liquid material balance as specified in paragraphs (i)(1)(i) through (v) of this section and use the applicable equations in paragraphs (i)(1)(vi) through (ix) of this section to convert the data to units of the selected compliance option in paragraphs (e) through (h) of this section. Compliance is determined in accordance with paragraph (i)(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 7 of this section:

$$R_V = \frac{M_{vr} + M_{vret}}{\sum_{i-1}^{p} C_{vi} M_i + \sum_{i=1}^{q} C_{vij} M_{ij}} \times 100 \quad \text{Eq. 7}$$

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 § 63.3370.

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 8 of this section:

$$H_e = \left[1 - \frac{R_v}{100}\right]\left[\sum_{i=1}^{p} C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij} - M_{vret}\right] \quad \text{Eq. 8}$$

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 § 63.3370.

(viii) *Organic HAP emission rate based on coating solids applied.* Calculate the organic HAP emission rate based on coating solids applied using Equation 9 of this section:

$$L = \frac{H_e}{\sum_{i=1}^{p} C_{si} M_i + \sum_{j=1}^{q} C_{sij} M_{ij}} \qquad \text{Eq. 9}$$

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 10 of this section:

$$S = \frac{H_e}{\sum_{i=1}^{p} M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq. 10}$$

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 (l) 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 (i)(2)(i) through (vii) of this section. Use the applicable equations specified in paragraphs (i)(2)(viii) through (x) of this section to convert the monitoring and other data into units of the selected compliance option in paragraphs (e) through (h) of this section. Compliance is determined in accordance with paragraph (i)(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 11 of this section:

$$R = \frac{(E)(CE)}{100} \qquad \text{Eq. 11}$$

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 12 of this section:

$$H_e = (1 - R)\left(\sum_{i=1}^{p} C_{ahi} M_i\right) - M_{vret} \qquad \text{Eq. 12}$$

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 9 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 10 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 (l) of this section.

(j) *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 (j)(1) through (3) of this section. Compliance is determined in accordance with paragraph (j)(4) 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) You are in compliance with the emission standards in § 63.3320(b) if the control device is operated such that the average operating parameter value is greater than or less than (as appropriate) the operating parameter value established in accordance with § 63.3360(e) 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 (l) of this section.

(k) *Oxidizer compliance demonstration procedures.* If you use an oxidizer to control emissions, you must show compliance by following the procedures in paragraph (k)(1) of this section. Use the applicable equations specified in paragraph (k)(2) of this section to convert the monitoring and other data into units of the selected compliance option in paragraph (e) through (h) of this section. Compliance is determined in accordance with paragraph (k)(3) 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 (k)(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 (p)(1) of this section into the units of the selected compliance option using the calculation procedures specified in paragraphs (k)(2)(i) through (iv) of this section.

(i) *Control efficiency.* Calculate the overall organic HAP control efficiency achieved using Equation 11 of this section.

(ii) *Organic HAP emitted.* Calculate the organic HAP emitted during the month using Equation 12 of this section.

(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 9 of this section.

(iv) *Organic HAP based on coating materials applied.* Calculate the organic HAP emission rate based on coating material applied using Equation 10 of this section.

(3) You are in compliance with the emission standards in § 63.3320(b) if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with § 63.3360(e) 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 (l) of this section.

(l) *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), (h), (i)(1)(x)(D), (i)(2)(xi)(D), or (k)(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 13a of this section for an existing affected source:

$$H_a = 0.20\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.04\left[\sum_{i=1}^{p} M_i (1 - G_i) + \sum_{j=1}^{q} M_{L_j}\right] \qquad \text{Eq. 13a}$$

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 13b of this section for a new affected source:

$$H_a = 0.08\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.016\left[\sum_{i=1}^{p} M_i \left(1 - G_i\right) + \sum_{j=1}^{q} M_{L_j}\right] \qquad \text{Eq. 13b}$$

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.

(m) [Reserved]

(n) *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 (n)(1) through (4) of this section, and use the calculation procedures specified in paragraph (n)(5) of this section to convert the monitoring and other data into units of the selected control option in paragraphs (e) through (h) of this section. Use the procedures specified in paragraph (n)(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 (i)(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 (i)(1)(ii), (iii), (v), and (vi) and (o) 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 (i)(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 (i)(2)(i) through (iii), (vi), and (o) 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 (k)(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 (k)(1)(i) through (iii), (v), and (o) 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 6 of this section. 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 (n)(1) through (4) of this section into the units of the selected compliance option using the calculation procedures specified in paragraphs (n)(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 (n)(1), (2)(ii), (3)(iii), and (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 9 of this section.

(iv) *Organic HAP based on materials applied.* Calculate the organic HAP emission rate based on material applied using Equation 10 of this section.

(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 (n)(1) through (3) of this section were maintained at the values established under §§ 63.3350 and 63.3360; and

(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 (l) 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 6 of this section.

(o) *Intermittently-controlled and never-controlled work stations.* If you have been expressly referenced to this paragraph by paragraphs (n)(1)(ii), (n)(2)(ii)(B), or (n)(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 (n)(1)(ii) of this section, you must calculate the organic HAP emitted during the month using Equation 14 of this section:

$$H_e = \left[\sum_{i=1}^{p} M_{Ci} C_{ahi}\right]\left[1 - \frac{R_v}{100}\right] + \left[\sum_{i=1}^{p} M_{Bi} C_{ahi}\right] - M_{vret} \qquad \text{Eq. 14}$$

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 (n)(2)(ii)(B) or (n)(3)(iii)(B) of this section, you must calculate the organic HAP emitted during the month using Equation 15 of this section:

$$H_e = \left[\sum_{i=1}^{p} M_{Ci} C_{ahi}\right]\left[1 - \frac{R}{100}\right] + \left[\sum_{i=1}^{p} M_{Bi} C_{ahi}\right] - M_{vret} \qquad \text{Eq. 15}$$

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.

(p) *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 (i)(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 (i)(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 (k)(1)(i) through (iii) and (k)(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.

Notifications, Reports, and Records

§ 63.3400 What notifications and reports must I submit?

(a) Each owner or operator of an affected source subject to this subpart must submit the reports specified in paragraphs (b) through (g) of this section to the Administrator:

(b) You must submit an initial notification as required by § 63.9(b).

(1) Initial notification for existing affected sources must be submitted no later than 1 year before the compliance date specified in § 63.3330(a).

(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 must be postmarked or delivered 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.

(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 postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(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) The compliance report must contain the information in paragraphs (c)(2)(i) through (vi) 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 CEMS to comply with the emission limitations in this subpart, the compliance report must contain the information in paragraphs (c)(2)(i) through (iii) of this section, and:

(A) The total operating time of each affected source 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) Information on the number, duration, and cause for CPMS downtime incidents, if applicable, other than downtime associated with zero and span and other calibration checks.

(vi) For each deviation from an emission limit occurring at an affected source where you are using a CEMS to comply with the emission limit in this subpart, you must include the information in paragraphs (c)(2)(i) through (iii) and (vi)(A) through (J) of this section.

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

(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 CPMS downtime during the reporting period and the total duration of CEMS and 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 CPMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.

(I) The date of the latest CEMS and CPMS certification or audit.

(J) A description of any changes in CEMS, CPMS, or controls since the last reporting period.

(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) You must submit a Notification of Compliance Status as specified in § 63.9(h).

(f) 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). The performance test reports must be submitted as part of the notification of compliance status required in § 63.3400(e).

(g) You must submit startup, shutdown, and malfunction 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.

(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.

§ 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, 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); and

(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).

(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).

(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 requirements of § 63.10(b).

Delegation of Authority

§ 63.3420 What authorities may be delegated to the States?

(a) In delegating implementation and enforcement authority to a State under 40 CFR part 63, subpart E, the authorities contained in paragraph (b) of this section must be retained by the Administrator and not transferred to a State.

(b) Authority which will not be delegated to States: § 63.3360(c), approval of alternate test method for organic HAP content determination; § 63.3360(d), approval of alternate test method for volatile matter determination.

If you are required to comply with operating limits by § 63.3321, you must comply with the applicable operating limits in the following table:

Tables to Subpart JJJJ of Part 63

TABLE 1 TO SUBPART JJJJ OF PART 63.—OPERATING LIMITS IF USING ADD-ON CONTROL DEVICES AND CAPTURE SYSTEM

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 below the combustion temperature limit established according to § 63.3360(e)(3)(i).	i. Collecting the combustion temperature data according to § 63.3350(e)(9); 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 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)(9); 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 the limit established according to § 63.3360(e)(3)(ii).	i. Collecting the catalyst bed inlet and outlet temperature data according to § 63.3350(e)(9); 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.
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)).

You must comply with the applicable General Provisions requirements according to the following table:

TABLE 2 TO SUBPART JJJJ OF PART 63.—APPLICABILITY OF 40 CFR PART 63 GENERAL PROVISIONS TO SUBPART JJJJ

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 63.1(a)(1)–(4)	Yes.	

TABLE 2 TO SUBPART JJJJ OF PART 63.—APPLICABILITY OF 40 CFR PART 63 GENERAL PROVISIONS TO SUBPART JJJJ—Continued

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 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(d)	No	Reserved.
§ 63.1(e)	Yes.	
§ 63.1(e)(4)	No.	
§ 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.	
§ 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.	
§ 63.6(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)	Yes	Provisions pertaining to SSMP, and CMS do not apply unless an add–on control system is used to comply with the emission limitations.
§ 63.6(f)	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	Yes.	
§ 63.8(a)(1)–(2)	Yes.	
§ 63.8(a)(3)	No	Reserved.
§ 63.8(a)(4)	No.	
§ 63.8(b)	Yes.	
§ 63.8(c)(1)–(3)	Yes	§ 63.8(c)(1)(i) & (ii) only apply if you use capture and control systems and are required to have a start-up, shutdown, and malfunction plan.
§ 63.8(c)(4)	Yes.	
§ 63.8(c)(5)	No	Subpart JJJJ does not require COMS.
§ 63.8(c)(6)–(c)(8)	Yes	Provisions for COMS are not applicable.
§ 63.8(d)–(f)	Yes	§ 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.	

TABLE 2 TO SUBPART JJJJ OF PART 63.—APPLICABILITY OF 40 CFR PART 63 GENERAL PROVISIONS TO SUBPART JJJJ—Continued

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 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.	
§ 63.10(a)	Yes.	
§ 63.10(b)(1)–(3)	Yes	§ 63.10(b)(2)(i) through (v) only apply if you use a capture and control system.
§ 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)–(15)	Yes.	
§ 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)–(5)	Yes.	
§ 63.10(e)(1)–(2)	Yes	Provisions for COMS are not applicable.
§ 63.10(e)(3)–(4)	No.	
§ 63.10(f)	Yes.	
§ 63.11	No.	
§ 63.12	Yes.	
§ 63.13	Yes.	
§ 63.14	Yes	Subpart JJJJ includes provisions for alternative ASME test methods that are incorporated by reference.
§ 63.15	Yes.	

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May 30, 1996

Part II

Environmental Protection Agency

40 CFR Parts 9 and 63

Final Standards for Hazardous Air Pollutant Emissions from the Printing and Publishing Industry; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9 and 63

[AD–FRL–5509–1]

RIN 2060–AD95

National Emission Standards for Hazardous Air Pollutants; Final Standards for Hazardous Air Pollutant Emissions From the Printing and Publishing Industry

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates national emission standards for hazardous air pollutants (NESHAP) under section 112 of the Clean Air Act (CAA), as amended in 1990 for the printing and publishing industry. The NESHAP requires existing and new major sources to control emissions using the maximum achievable control technology (MACT) to control hazardous air pollutants (HAP). The standards were proposed in the Federal Register on March 14, 1995 (60 FR 13664). This Federal Register action announces the EPA's final decisions on the rule.

The final rule includes organic HAP emission limits for publication rotogravure, product and packaging rotogravure, and wide-web flexographic printing. A variety of organic HAP are used as solvents and components of inks and other materials used by printers. The HAP emitted by the facilities covered by this final rule include xylene, toluene, ethylbenzene, methyl ethyl ketone, methyl isobutyl ketone, methanol, ethylene glycol, and certain glycol ethers. All of these pollutants can cause reversible or irreversible toxic effects following exposure. The potential toxic effects include eye, nose, throat, and skin irritation; and damage to the heart, liver, kidneys, and blood cells. The final rule is estimated to reduce baseline emissions of HAP by 31 percent or 6700 megagrams per year (Mg/yr) (7400 tons per year (tpy)).

The emissions reductions achieved by these standards, combined with the emissions reductions achieved by similar standards, will achieve the primary goal of the CAA, which is to ''enhance the quality of the Nation's air resources so as to promote the public health and welfare and productive capacity of its population''. The intent of this final regulation is to protect the public health by requiring the maximum degree of reduction in emissions of organic HAP from new and existing sources, taking into consideration the cost of achieving such emission reduction, any nonair quality, health and environmental impacts, and energy requirements.

EFFECTIVE DATE: May 30, 1996.

ADDRESSES: *Background Information Document.* The background information document (BID) for the promulgated standards may be obtained from the U.S. Department of Commerce, National Technical Information Service, Springfield, Virginia, 22161, telephone number (703) 487–4650. Please refer to ''National Emission Standards for Hazardous Air Pollutants for the Printing and Publishing Industry—Background Information for Promulgated Standards,'' EPA–453/R–96–005b. The BID contains (1) a summary of the changes made to the standards since proposal, and (2) a summary of all the public comments made on the proposed standards and the Administrator's response to the comments.

Electronic versions of the promulgation BID as well as this final rule are available for download from the EPA's Technology Transfer Network (TTN), a network of electronic bulletin boards developed and operated by the Office of Air Quality Planning and Standards. The TTN provides information and technology exchange in various areas of air pollution control. The service is free, except for the cost of a phone call. Dial (919) 541–5742 for data transfer of up to 14,400 bits per second. If more information on TTN is needed, contact the systems operator at (919) 541–5384.

Docket. Docket No. A–92–42, containing supporting information used in developing the promulgated standards, is available for public inspection and copying from 8 a.m. to 5:30 p.m., Monday through Friday, at the EPA Air and Radiation Docket and Information Center, Waterside Mall, Room M–1500, Ground Floor, 401 M Street, SW, Washington, DC 20460; telephone number (202) 260–7548, FAX (202) 260–4400. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Mr. David Salman at (919) 541–0859, Emission Standards Division (MD–13), U. S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION:

Regulated Entities

Entities potentially regulated by this action are those which have the potential to emit HAP listed in section 112(b) of the CAA in the following regulated categories and entities:

Category	Examples of regulated entities
Industry	Printers, publishers, and manufacturers of packaging, wall and floor coverings, house furnishings and sanitary paper products employing rotogravure printing or wide-web flexographic printing technologies.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that the EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your facility is regulated by this action, you should carefully examine the applicability criteria in § 63.820 of the rule. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this preamble.

Under section 307(b)(1) of the CAA, judicial review of NESHAP is available only by the filing of a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of today's publication of this rule. Under section 307(b)(2) of the CAA, the requirements that are the subject of today's notice may not be challenged later in civil or criminal proceedings brought by the EPA to enforce these requirements.

The information presented in this preamble is organized as follows:

I. Background
  A. Regulatory Background and Purpose
  B. Common Sense Initiative
II. The Standards
III. Summary of Impacts
IV. Significant Changes to the Proposed Standards
  A. Public Participation
  B. Comments on the Proposed Standards
  C. Significant Changes
  D. Minor Changes
V. Administrative Requirements
  A. Docket
  B. Paperwork Reduction Act
  C. Executive Order 12866: Administrative Designation and Regulatory Analysis
  D. Executive Order 12875
  E. Regulatory Flexibility Act
  F. Unfunded Mandates Act of 1995
  G. Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA)

I. Background

A. Regulatory Background and Purpose

Section 112 of the CAA requires control of emissions of HAP to protect public health and the environment. This final regulation will reduce emissions of organic HAP from rotogravure and wide-web flexographic printing operations.

In part, section 112 requires that emission standards be promulgated for all categories of major sources of HAP, and for many categories of small ''area'' sources. The CAA lists 189 HAP believed to cause adverse health or environmental effects. Major sources are defined as those that emit or have the potential to emit at least 10 tons per year of any single HAP or 25 tons per year of any combination of HAP.

In the July 16, 1992, Federal Register (57 FR 31576), the EPA published the initial list of categories of sources slated for regulation. This list includes the printing and publishing category. Emissions standards for the listed source categories are required to be promulgated between November 1992 and November 2000.

Congress specified that each of these standards must require the maximum reduction in emissions of HAP that the EPA determines is achievable considering cost, non-air-quality health and environmental impacts, and energy requirements. In essence, these MACT standards ensure that all major sources of air toxics achieve the level of control already being achieved by the better controlled and lower emitting sources in each category. This approach creates a level economic playing field, ensuring that facilities that employ cleaner processes and good emissions controls are not disadvantaged relative to competitors with poorer controls. At the same time, this approach provides assurance to every citizen, in every community, that any major source of toxic air pollution located nearby will have to effectively control its emissions.

All U.S. publication rotogravure facilities and some product and packaging rotogravure and wide-web flexographic printing facilities are major sources of HAP emissions, with the potential to emit over 23 Mg/yr (25 tpy) of organic HAP, including toluene, xylene, ethylbenzene, methanol, methyl ethyl ketone, methyl isobutyl ketone, ethylene glycol, and certain glycol ethers. All of these pollutants can cause reversible or irreversible toxic effects following exposure. The potential toxic effects include irritation of the eyes, nose, throat, and skin; and damage to the heart, liver, kidneys, and blood cells.

The EPA recognizes that the degree of adverse effects to health resulting from the most significant emissions identified can range from mild to severe. The extent to which the effects could be experienced is dependent upon the ambient concentrations and exposure time. The latter is further influenced by source-specific characteristics such as emission rates and local meteorological conditions. Human variability factors, including genetics, age, pre-existing health conditions, and lifestyle also influence the degree to which effects to health occur.

The final standards will reduce organic HAP emissions from rotogravure and wide-web flexographic printing operations by 6,700 Mg/yr (7,400 tpy) from a baseline level of 21,700 Mg/yr (23,900 tpy). No small firms are at risk of closure as a result of the final standards, and there will not be a significant economic impact on a substantial number of small entities.

B. Common Sense Initiative

On October 17, 1994, the Administrator established the Common Sense Initiative (CSI) Council in accordance with the Federal Advisory Committee Act (U.S.C. App. 2, section 9(c)) requirements. The CSI addresses six industrial sectors. The Printing CSI Subcommittee addresses the Printing and Publishing industry.

The following are the six principles of the CSI program, as stated in the ''Advisory Committee Charter.''

1. *Regulation.* Review existing regulations for opportunities to get better environmental results at less cost. Improve new rules through increased coordination.

2. *Pollution Prevention.* Actively promote pollution prevention as the standard business practice and a central ethic of environmental protection.

3. *Recordkeeping and Reporting.* Make it easier to provide, use, and publicly disseminate relevant pollution and environmental information.

4. *Compliance and Enforcement.* Find innovative ways to assist companies that seek to comply and exceed legal requirements while consistently enforcing the law for those that do not achieve compliance.

5. *Permitting.* Improve permitting so that it works more efficiently, encourages innovation, and creates more opportunities for public participation.

6. *Environmental Technology.* Give industry the incentives and flexibility to develop innovative technologies that meet and exceed environmental standards while cutting costs.

The Printing CSI Subcommittee met for the first time just before the proposed rule was published. Several Subcommittee members were very involved in the development of the proposed rule. All Subcommittee members were made aware of the proposal and copies of the proposal were provided to all interested Subcommittee members. Although the Subcommittee did not choose to make review of the proposed rule one of its projects, several Subcommittee members did submit comments on the proposed rule. The subcommittee was provided with an update on the final rule at its March 19, 1996 meeting.

Many aspects of the CSI principles are reflected in the final standards. The alternatives considered in the development of this regulation, including those alternatives selected as standards for new and existing printing facilities, are based on process and emissions data received from over 600 printing facilities. The EPA met with industry and trade groups on numerous occasions to discuss these data. In addition, printers, trade organizations, ink manufacturers, and State and local regulatory authorities commented on draft versions of the proposed regulation and on the proposed regulation. Two trade organizations provided extensive comments. All comments were considered, and a number of changes to the final rule reflect these comments. Of major concern to industry were the opportunity to comply through pollution prevention by using low HAP content materials, the analytical method for HAP content determination, reliance on formulation data for HAP and volatile matter determination, and flexible compliance demonstration provisions that account for different configurations of work stations and printing presses within a facility.

The regulation allows sources the flexibility to select from various options for compliance. Sources may reduce HAP usage and emissions through conversion to waterborne, lower HAP solvent-borne or ultraviolet/electron beam cure materials. Alternatively, sources may install or upgrade existing capture and control devices to meet the proposed standard. Finally, sources have the option to comply by a combination of lower HAP materials and capture and control. Facilities may select the most cost-effective option based on facility specific considerations.

The final rule allows existing facilities three years from the date of promulgation to comply. This is the maximum amount of time allowed under the CAA. This time frame will provide the greatest opportunity for

developing and adopting low-HAP content materials, and provide sufficient time for facilities that choose to install or upgrade capture and control equipment.

Included in the final rule are methods for determining initial compliance as well as monitoring, recordkeeping, and reporting requirements. All of these components are necessary to ensure that sources will comply with the standards both initially and over time. However, the EPA has made every effort to simplify the requirements in the rule. The EPA has also attempted to maintain consistency with existing regulations.

Representatives from other interested EPA offices and programs were included in the regulatory development process as members of the work group. The work group reviewed and concurred with the regulation before proposal and promulgation. Therefore, the EPA believes that the implications to other EPA offices and programs have been adequately considered during the development of the rule.

II. The Standards

The final rule is applicable to all existing and new rotogravure and wide-web flexographic facilities that are major sources of HAP or are located at plant sites that are major sources of HAP.

Publication rotogravure facilities subject to this rule must 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 capture and 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.

Product and packaging rotogravure and wide-web flexographic printing facilities subject to this rule must limit emissions to no more than five percent of the organic HAP applied each month, or to no more than four percent of the mass of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied each month, or to no more than 20 percent of the solids applied each month, or to an equivalent allowable mass based on the as-applied solids contents of the materials applied each month.

Section 112(a) of the CAA defines major source as a source, or group of sources, located within a contiguous area and under common control that emits or has the potential to emit, considering controls, 9.1 Mg/yr (10 tpy) or more of any individual HAP or 22.7 Mg/yr (25 tpy) or more of any combination of HAP. Area sources are stationary sources that do not qualify as ''major.'' ''Potential to emit'' is defined in the section 112 General Provisions (40 CFR 63.2) as ''the maximum capacity of a stationary source to emit a pollutant under its physical or operational design.'' Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on the hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is Federally enforceable.

The EPA notes that in recent decisions, *National Mining Ass'n* v. *EPA*, 59 F.3d 1351 (D.C. Cir. 1995) and *Chemical Manufacturers Ass'n* v. *EPA*, No. 89–1514, slip op. (D.C. Cir. Sept. 15, 1995), the District of Columbia Circuit court addressed challenges related to the EPA's requirement that a source which wishes to limit its potential to emit must obtain a federally enforceable limit for the New Source Review and NESHAP programs. The EPA is currently reviewing its Federal enforceability requirements in light of these court decisions, and has not yet decided how it will address this issue. Once the EPA has completed its review of the Federal enforceability requirements in all relevant programs including the NESHAP program, the EPA will make available in a Federal Register notice its response to the court decisions. In the interim, the EPA has issued its Interim Policy on Enforceability of Limitations on Potential to Emit (January 22, 1996), which summarizes how certain State-enforceable limits may be recognized under this definition pending further rulemaking.

To determine the applicability of this rule to facilities that are within a contiguous area of other HAP-emitting emission sources that are not part of the source category covered by this rule, the owner or operator must determine whether the plant site as a whole is a major source. A formal HAP emissions inventory must be used to determine if total potential HAP emissions from all HAP emission sources at the plant site meet the definition of a major source. If the facility commits to HAP usage restrictions as provided in the rule that ensure potential HAP emissions will be below the major source cutoffs, only simplified reporting and recordkeeping requirements apply. A facility may also limit its potential to emit through other appropriate mechanisms that may be available through the permitting authority.

Existing major sources may switch to area source status by obtaining and complying with a federally enforceable limit on their potential to emit prior to the ''compliance date'' of the regulation. The ''compliance date'' for existing sources for this regulation is defined as May 30, 1999. New major sources are required to comply with the NESHAP requirements upon start-up or the promulgation date, whichever is later. A facility that has not obtained federally enforceable limits on its potential to emit by the compliance date, and that has not complied with the NESHAP requirements, will be in violation of the NESHAP. All sources that are major sources for HAP on the compliance date or become major sources after the compliance date are required to comply permanently with the NESHAP to ensure that the maximum achievable reductions in toxic emissions are achieved and maintained.

The final standards impose limits on organic HAP emissions from rotogravure and wide-web flexographic printing. Publication rotogravure facilities must demonstrate compliance on a monthly basis considering all organic HAP used on publication rotogravure presses and all affiliated equipment, including proof presses, cylinder and parts cleaners, ink and solvent mixing and storage equipment, and solvent recovery equipment. Facilities may comply using capture and control equipment, substitution of non-HAP solvents for HAP, or a combination of these methods.

Product and packaging rotogravure and wide-web flexographic printing facilities must demonstrate compliance on a monthly basis considering all organic HAP applied on product and packaging rotogravure and wide-web flexographic printing presses. Certain presses which are used primarily for coating, laminating, or printing using other technologies than rotogravure printing and wide-web flexographic printing may be excluded from the affected source, subject only to simplified recordkeeping requirements. Owners or operators of such equipment will be subject to the appropriate source category standard when such a standard is issued.

Product and packaging rotogravure and wide-web flexographic printers may comply through the use of capture and control equipment, the substitution of non-HAP solvents for HAP, or a combination of these methods. Facilities may comply on the basis of organic HAP emissions per mass of solids applied, organic HAP emissions per mass of

materials applied, allowable organic HAP emissions based on the as-applied solids content of the materials applied, or overall organic HAP control efficiency.

III. Summary of Impacts

These standards will reduce nationwide emissions of HAP from rotogravure and wide-web flexographic printing operations by approximately 6700 Mg/yr (7400 tpy) in 1999 compared to the emissions that would result in the absence of the standards. These standards will also, to some extent, reduce volatile organic compounds (VOC) emissions from those same operations compared to the emissions that would result in the absence of the standards. The extent of the reduction in VOC emissions cannot be predicted because of uncertainty over the extent to which printers will comply through substitution of water and non-VOC organics for organic HAP. No significant adverse secondary air, water, solid waste, or energy impacts are anticipated from the promulgation of these standards.

Implementation of this regulation is expected to result in nationwide annual costs (including capital recovery) of approximately $40 million beyond baseline. These costs include $21 million per year for publication rotogravure printers and $19 million per year for package and product rotogravure and wide-web flexographic printers. These costs include capital recovery over a ten year period, operating costs for newly installed and upgraded capture and control systems, and costs for recordkeeping, reporting, and monitoring. Cost estimates for publication rotogravure printers remain unchanged from the proposed rule. Estimated costs for package and product rotogravure and wide-web flexographic printers are $2 million less than those for the proposed rule as a result of the facility-wide definition of affected source.

The economic impact analysis conducted before proposal showed that the economic impacts from the proposed standards would be insignificant. Since compliance costs and reporting and recordkeeping burdens have been reduced in the final rule, the economic impacts of the final rule are also insignificant.

IV. Significant Changes to the Proposed Standards

A. Public Participation

The standards were proposed and the preamble was published in the Federal Register on March 14, 1995 (60 FR 13664). The preamble to the proposed standards discussed the availability of the regulatory text and proposal BID, which described the regulatory alternatives considered and the impacts of those alternatives. Public comments were solicited at the time of proposal, and copies of the regulatory text and BID were distributed to interested parties. Electronic versions of the preamble, regulation, and BID were made available to interested parties via the TTN (see **SUPPLEMENTARY INFORMATION** section of this preamble). A correction notice which addressed minor typographical errors was published in the Federal Register on April 3, 1995 (60 FR 16920).

The preamble to the proposed standards provided the public the opportunity to request a public hearing. However, a public hearing was not requested. The public comment period was from March 14, 1995 to May 30, 1995. In all, 117 comment letters were received. The comments have been carefully considered, and changes have been made to the proposed standards when determined by the Administrator to be appropriate.

B. Comments on the Proposed Standards

Comments on the proposed standards were received from 117 commenters; the commenters were comprised of printers, ink manufacturers, State and local air pollution control agencies, trade organizations for printers and control equipment manufacturers, and citizens. A detailed discussion of these comments and responses can be found in the promulgation BID, which is referred to in the **ADDRESSES** section of this preamble. The discussion of comments and responses in the BID serves as the basis for the revisions that have been made to the standards between proposal and promulgation. Many of the comment letters contained multiple comments.

C. Significant Changes

Several significant changes have been made in response to the comments received on the proposed standards. A summary of the major changes is presented below.

(1) Incidental Printing and Ancillary Printing Equipment

The rule affects rotogravure and wide-web flexographic printing operations at major sources. Several commenters noted that this will include facilities that use little or no HAP on rotogravure or wide-web flexographic printing presses, but are major sources as a result of activities conducted on other equipment in other source categories. In addition, commenters noted that equipment that meets the definition of rotogravure or wide-web flexographic printing press but conducts only a small amount of rotogravure or wide-web flexographic printing operations and is primarily used for coating, laminating, or printing by other processes would have, as proposed, been subject to the standard.

The first case above can be characterized as ''incidental printing'' because the total work done on rotogravure and wide-web flexographic printing presses at the facility is minimal and is incidental to the other operations conducted at the facility. In the second case above, the equipment can be characterized as ''ancillary printing equipment'' because the work being done on rotogravure and wide-web flexographic print stations is minimal in comparison to, and ancillary to, the work being done on other work stations (i.e., coating stations) on that equipment.

The EPA has considered control requirements for incidental printing as a separate subgroup. Under the rule, product and packaging rotogravure and wide-web flexographic printing affected sources that apply no more than 500 kilograms of materials each month and that are located at facilities that are major sources of HAP are considered incidental printers. This definition ensures that the total work done on product and packaging rotogravure and wide-web flexographic presses at the facility is minimal and is incidental to the other operations conducted at the facility.

The EPA believes it is appropriate not to subject incidental printing operations to the requirements in § 63.825 that apply to product and packaging rotogravure and wide-web flexographic printing. The EPA's analysis of the MACT floor for product and packaging rotogravure and wide-web flexographic printing is based on emissions levels and control techniques at facilities primarily engaged in printing that generally apply more than 500 kilograms of material each month on product and packaging rotogravure and wide-web flexographic presses. The EPA has little information on which to establish a MACT control level for incidental printing. The available information indicates that the MACT floor for this subgroup is no control.

The final standard includes simplified requirements and does not mandate emission controls for incidental printers. Affected sources within this subgroup are those which apply no more than 500 kilograms of material

each month or no more than 400 kilogams of HAP each month on product and packaging rotogravure and wide-web flexographic presses. The 400 kilogram of HAP applied per month alternative threshold has been included to provide affected sources applying somewhat more than 500 kilograms of material per month with the opportunity to maintain incidental printer status if they reduce the HAP content of the materials applied so that the monthly HAP applied is no more than would be applied by an affected source that applied 500 kilograms of material per month. Affected sources in this subgroup would be subject only to initial notification requirements and recordkeeping requirements to show that one of the thresholds is met every month.

The type of simplified requirements included in the final standard for this subgroup of product and packaging or wide-web flexographic sources were not made available to publication rotogravure affected sources because each press at a publication rotogravure affected source would far exceed the thresholds every month. A single publication rotogravure press would, in fact, be a major source of HAP.

The final standard also permits the owner or operator of a product and packaging rotogravure or wide-web flexographic printing affected source to choose to exclude ancillary printing equipment from the affected source. This equipment is used primarily for coating, laminating, or other operations besides product and packaging rotogravure and wide-web flexographic printing. Presses on which five weight-percent or less of the total material applied each month is applied by rotogravure or wide-web flexographic print stations would be subject only to a simplified recordkeeping requirement. The EPA believes it is appropriate to provide the owner or operator with the option not to subject these presses to the HAP emission limitations for product and packaging and wide-web flexographic printing in § 63.825 because the work being done on the rotogravure and wide-web flexographic print stations on these presses is ancillary to the work being done on other work stations (i.e., coating stations) on these presses. The EPA is separately establishing MACT for other source categories, such as the paper and other web coating source category and the metal coil coating source category, which may be more appropriate for this type of equipment. Ancillary printing equipment, if excluded from this standard, will be subject to the appropriate source category standard when such a standard is issued.

(2) Research and Laboratory Equipment

Several comments were received requesting exemption of research and laboratory equipment. Commenters noted that the purpose and operation of research presses are independent of their location. One commenter noted that research and laboratory operations could be exempted from this standard and a separate standard for these operations could be developed.

All research and laboratory equipment has been excluded from the final standard whether or not it is collocated with production facilities. In order to regulate research and laboratory equipment, it would be necessary to develop a separate source category as directed by section 112(c)(7) of the CAA to assure equitable treatment of such equipment.

(3) Addition of Presses to Existing Affected Sources

Comments were received concerning triggering of new source compliance deadlines as a result of adding new presses to existing control systems or new stations to existing presses. Commenters noted that this would discourage replacement and modification of presses or stations to take advantage of low-HAP materials.

Addition of presses to existing affected sources will subject the affected source to the compliance deadline for new sources only if the additional press or presses constitutes a reconstruction of the source, as defined in § 63.2. Additions, replacements, and modifications to existing sources which do not meet the definition of reconstruction do not alter the compliance deadline.

(4) Affected Source for Product and Packaging Rotogravure and Wide-web Flexographic Printing Facilities

Comments were received suggesting changes in the definition of affected source at product and packaging rotogravure and wide-web flexographic printing facilities to simplify compliance demonstration. One commenter stated that a facility-wide definition of affected source would significantly cut recordkeeping expenses.

In response, the final standard considers all rotogravure and wide-web flexographic printing equipment at a given facility as a single affected source. This grouping is more consistent with the way that the MACT floor was determined and is consistent with other MACT standards which have grouped various emission points into a single affected source. It is also more consistent with the definition of affected source for publication rotogravure.

This definition of affected source simplifies reporting and recordkeeping in many cases. In addition, sources may achieve the required emissions reductions by considering emissions from the entire affected source, including controlled and uncontrolled presses. This will allow sources to comply in the most cost-effective way and will not require expensive control equipment for small presses which emit relatively small amounts of organic HAP if equivalent emissions reductions can be achieved elsewhere in the affected source.

(5) Organic HAP Analysis Methods

Ninety-six comments were received requesting that the EPA accept formulation data in lieu of requiring the use of EPA Method 311 to determine organic HAP content of printing materials. Formulation data were preferred to reduce analytical cost and delays due to chemical analysis. Some commenters also suggested various modifications to the proposed analytical technique in the interests of improved accuracy, consistency with apparatus presently in operation, and reduced analytical costs.

The final standard adopts Method 311, as revised and promulgated with the Wood Furniture Manufacturing Operations NESHAP (60 FR 62930), for organic HAP analysis. Printers and ink manufacturers have the option of relying on formulation data if the data meet specified criteria. In the event of any discrepancy between formulation data and the results of EPA Method 311, the results of EPA Method 311 shall be presumed to govern for all compliance purposes. In addition, the printer may determine the total volatile matter content of the material and use this value for the organic HAP content for all compliance purposes. This option may be chosen by printers using materials in which all, or nearly all, of the volatile matter is organic HAP in order to avoid the need for a more time-consuming analytic procedure.

(6) Volatile Matter Analysis Methods

Several comments were received requesting that formulation data be acceptable instead of chemical analysis data. Commenters noted this would greatly reduce analytical costs.

The final standard allows printers and ink manufacturers the option of relying on formulation data for volatile matter and solids content, in lieu of EPA Methods 24 and 24A. In the event of any

discrepancy between formulation data and the results of the EPA test methods, the test methods shall be presumed to govern for all compliance purposes.

(7) Compliance Monitoring for Catalytic Oxidizers

Nine commenters noted that the temperature downstream of a catalytic oxidizer was inappropriate for use as a monitoring parameter to indicate HAP destruction. The commenters noted that downstream temperature parameters established during performance testing under normal conditions might not be maintained during low-load conditions, yet this would not be an indication of excess emissions.

The final standard requires owners or operators using a catalytic oxidizer (that is, a catalytic incinerator) and monitoring an operating parameter to ensure compliance with the standard to monitor the temperature immediately upstream of the catalyst bed. The requirement to monitor the temperature downstream of the catalyst bed has been eliminated. Since the operating parameters are established during a test under normal operating conditions, a downstream temperature monitoring parameter might be impossible to meet during periods when organic loading to the oxidizer was lower than normal. This might have led to exceedances which were not indicative of improper operating conditions or excessive emissions.

(8) Additional Compliance Options for Product and Packaging Rotogravure and Wide-web Flexographic Printing Affected Sources

Several commenters requested clarification that compliance need only be demonstrated by a single procedure appropriate to the source's compliance strategy. Several commenters suggested that the rule should provide a variety of compliance demonstration alternatives to accomodate different aggregations of work stations and HAP control strategies.

In order to make the compliance options consistent with facility-wide definition of affected source, additional means of demonstrating compliance have been added to the final rule. Facilities may demonstrate that each material applied meets either of the organic HAP thresholds, or that all materials on average meet either of the organic HAP thresholds, or that the organic HAP emitted is less than the organic HAP allowed taking these thresholds into account. In addition, emissions from controlled and uncontrolled presses are aggregated to determine compliance across the entire affected source.

The final rule has been expanded to include ten procedures under which compliance can be demonstrated under different circumstances. Any one of the ten procedures can be used. These procedures are consistent with the proposed standards for low HAP materials and HAP emission control device operation. These procedures encompass the range of suggestions made by the commenters. The new compliance demonstration procedures in the final rule are expected to have a negligible impact on HAP emissions compared to the provisions in the proposed rule.

(9) Capture Efficiency Protocols and Test Methods

Four commenters requested that the rule allow the use of alternate capture efficiency test protocols approved by the EPA in lieu of the procedures specified in § 52.741.

The final rule includes additional options for capture efficiency tests. Provisions of the proposed rule pertaining to verification of permanent total enclosures and temporary total enclosure capture efficiency testing in accordance with § 52.741 have been retained in the final rule. The final rule also allows, as an alternative, the use of any capture efficiency protocol and test methods which satisfy the criteria of either the Data Quality Objective or Lower Confidence Limit approaches. An appendix describing these approaches has been added to the final rule. The use of these alternative approaches is optional for the owner or operator of the affected source and the EPA has determined that capture efficiency tests satisfying the criteria of these alternate approaches will be sufficiently rigorous to ensure compliance with the standard.

(10) Transition from Area Source to Major Source Status

A commenter requested that a provision allowing a transition period for a newly designated major source to come into compliance be incorporated in the rule. The commenter noted that the proposed rule had no provisions for a source to make this transition without being in violation of the standard.

A provision has been added to the final rule which provides a mechanism for owners or operators that have used the provisions of § 63.820(a)(2) to establish the facility as an area source to reestablish the facility as a major source. Such a source must continue to comply with its HAP usage commitments until it meets all requirements for major sources.

(11) Definition of ''Month''

In response to a comment, the definition of ''month'' in the final rule has been changed to include prespecified periods of 28 to 35 days. The revised definition will fit better with the materials accounting systems used by some facilities and have little or no effect on the emission reduction achieved by the standard.

(12) Alternatives to Vent Stream Flow Rate Monitoring

Seven commenters requested inclusion of alternative methods for vent stream flow rate monitoring, substitution of flow indicators rather than flow meters, or elimination of the flow rate monitoring requirement. One commenter recommended that press interlocks be permitted as an alternative to vent stream flow rate monitoring.

The final regulation includes alternatives to the vent stream flow rate measurement requirement. These alternatives are simpler than the requirements in the proposed rule, but still ensure that sufficient records will be generated to show when HAP containing vent streams are being delivered to a control device and to allow for proper calculation of HAP emissions. Owners or operators of product and packaging rotogravure or wide-web flexographic presses with intermittently-controllable work stations may, as alternatives to measuring vent stream flow rate, install flow indicators on the bypass lines, secure bypass line valves with locking mechanisms or car seals, continuously monitor bypass valve position, or equip the press with an interlock preventing operation when the control device is bypassed. Sampling lines for gas analyzers and relief valves needed for safety purposes are not considered bypass lines for the purposes of these provisions. Presses that do not have any intermittently-controllable work stations are not subject to these provisions.

(13) Provisions for Inclusion of Stand-alone Coating Equipment in Affected Source

One comment was received suggesting that off-line coaters sharing a common control device with printing presses should be included in the affected source at the discretion of the facility. It was noted that such a provision would avoid penalizing facilities that had tightened up their control systems by tying in other sources of HAP.

Provisions have been added to the final rule through which owners or operators of affected sources may, at

their option, under certain conditions, include stand-alone coating equipment in the affected source subject to this standard. This type of coating equipment is expected to be covered by one of several MACT standards (e.g., Paper and Other Web Coating) which are scheduled to be promulgated in the future. Printers choosing this option may avoid the difficulty of complying with multiple standards in the future. Stand-alone coating equipment must meet certain requirements to be eligible for inclusion under this provision. To be eligible, stand-alone coating equipment must either share a control device with a press included in the affected source, or process the same substrate as a press included in the affected source, or apply one or more of the same solids-containing materials as a press included in the affected source. If any eligible equipment is included under this provision, all eligible equipment at the facility must be included.

(14) Addition of Criteria To Determine Whether Method 25 or Method 25A is Appropriate for Performance Testing

The proposed rule required that performance tests employ either Method 25 or 25A, as appropriate to the conditions of the site. The final rule has been clarified to specify the conditions based on the required or anticipated organic volatile matter concentration at the exhaust from the control device. These conditions are based on guidance provided to regional offices and State programs, and clarify the conditions under which Method 25A are appropriate. This will reduce the administrative burden on some sources and will not reduce the stringency of the rule.

(15) Conditions Under Which Performance Test Is To Be Conducted

One commenter recommended testing under reasonably expected conditions and a second commenter recommended testing under normal conditions instead of maximum conditions.

The final rule has been made consistent with the General Provisions to require performance testing under ''normal operating conditions'' rather than ''maximum capacity.'' This will result in establishment of more representative operating parameters and will not cause an increase in HAP emissions.

(16) Clarification of Reporting and Recordkeeping Requirements

Several comments were received requesting clarification that only recordkeeping and reporting applicable to the specific control strategy employed were required. One commenter stated that area sources should be required to submit initial notifications so that States would be advised of their operations.

The final rule enumerates the types of excess emissions (including operating parameter exceedences) which must be included, as applicable, in the summary report. Recordkeeping requirements for incidental printing, ancillary printing equipment, and optional inclusion of stand-alone coating equipment have been added to the final rule.

The requirement for annual reporting of HAP usage by sources using the optional provisions of this rule to establish area source status has been eliminated from the final rule. A less burdensome requirement that such sources submit initial notifications has been added to the final rule. This initial notification will inform the Administrator that a source is using these optional provisions to establish area source status. The annual report was determined to be unnecessary because the source is required to maintain monthly records of HAP usage and to report any 12 month period in which the area source commitment is not met as part of its summary report.

D. Minor Changes

This section contains a list of several of the minor changes to the final rule.

(1) Revisions to definitions and phrasing have been made to clarify the regulation.

(2) Variables have been redefined as necessary to avoid ambiguity, and additional variables have been defined where necessary to explicitly describe the additional compliance options available in the final rule.

(3) Typographical errors have been corrected.

(4) The citation of the basis for delegation of regulatory authority has been corrected.

(5) The summary table in the proposed rule has been eliminated. (The General Provisions cross reference table has been retained and additional clarifying notes have been added.)

(6) Language has been added to the final rule which clarifies that the optional area source mechanism included in the rule does not preclude an owner or operator from taking advantage of other mechanisms which are available to establish area source status.

(7) A provision in the proposed rule requiring owners or operators of affected sources to obtain part 70 or part 71 operating permits has been eliminated from the final rule because this provision may have been inadvertently interpreted to require these permits for sources which used the optional provisions of the rule to establish area source status. Such sources may be required to obtain such permits, but are not required to obtain them as a result of using the optional provision in this standard.

(8) The deadline for initial notification for existing sources has been extended until one year before the compliance date.

V. Administrative Requirements

A. Docket

The Docket is an organized and complete file of all the information considered by the EPA in the development of this rulemaking. The Docket is a dynamic file, since material is added throughout the rulemaking development. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. The contents of the Docket, including the BID for the proposed and promulgated standards and the EPA responses to significant comments, will serve as the record in case of judicial review (see 42 U.S.C. 7607(d)(7)(A)).

B. Paperwork Reduction Act

The Office of Management and Budget (OMB) has approved the information collection requirements contained in this rule under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*, and has assigned OMB control number 2060–0335. The EPA is therefore amending the table of currently approved information collection request (ICR) control numbers issued by OMB for various regulations. This amendment updates the table to accurately display those information requirements contained in this final rule. This display of the OMB control number and its subsequent codification in the Code of Federal Regulations satisfies the requirements of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*) and OMB's implementing regulations at 5 CFR part 1320.

The ICR was previously subject to public notice and comment prior to OMB approval. As a result, the EPA finds that there is ''good cause'' under section 553(b) of the Administrative Procedure Act (5 U.S.C. 553(b)) to amend the table in part 9 without prior notice and comment. Due to the technical nature of the table, further notice and comment would be unnecessary. For the same reasons, the EPA finds that there is good cause under 5 U.S.C. 553(d)(3).

The information required to be collected by this rule is necessary to identify the regulated entities who are subject to the rule and to ensure their compliance with the rule. The recordkeeping and reporting requirements are mandatory and are being established under authority of section 114 of the CAA. All information submitted to the EPA for which a claim of confidentiality is made will be safeguarded according to the EPA policies set forth in title 40, part 2, subpart B—Confidentiality of Business Information.

The total annual reporting and recordkeeping burden for this collection averaged over the first three years is estimated to be 89,965 hours per year. The average burden, per respondent, is 164 hours per year. The rule requires an initial one-time notification from each respondent and subsequent reports/notification would have to be submitted semiannually. Respondents operating capture systems and control devices would also be required to submit notifications of performance tests, performance test plans and reports of performance tests. There would be an estimated 500 respondents to the collection requirements. This estimate includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing methods for compliance with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

Send comments on the EPA's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, to the Director, OPPE Regulatory Information Division; U.S. Environmental Protection Agency (2136), 401 M St. SW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th St. NW, Washington, DC 20503; marked ''Attention: Desk Officer for EPA.'' Include the OMB control number in any correspondence.

C. Executive Order 12866: Administrative Designation and Regulatory Analysis

Under Executive Order 12866 (58 FR 51735 (October 4, 1993)), the EPA is required to judge whether a regulation is ''significant'' and therefore subject to OMB review and the requirements of this executive order to prepare a regulatory impact analysis (RIA). The order defines ''significant regulatory action'' as one that is likely to result in a rule that may (1) have an annual effect on the economy of $100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities, (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency, (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligation of recipients thereof, or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the executive order.

Pursuant to the terms of Executive Order 12866, OMB has notified the EPA that it considers this a ''significant regulatory action'' within the meaning of the executive order. The EPA has submitted this action to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

D. Executive Order 12875

To reduce the burden of Federal regulations on States and small governments, the President issued Executive Order 12875 on October 26, 1993, entitled *Enhancing the Intergovernmental Partnership*. In particular, this executive order is designed to require agencies to assess the effects of regulations that are not required by statute and that create mandates upon State, local, or tribal governments. Two methods exist for complying with the requirements of the executive order: (1) Assure that funds necessary to pay direct costs of compliance with a regulation are provided, or (2) provide OMB a description of the communications and consultations with State/local/tribal governments, the nature of their concerns, any written submission from them, and the EPA's position supporting the need to issue the regulation.

The EPA has always been concerned about the effect of the cost of regulations on small entities; the EPA has consulted with and sought input from public entities to explain costs and burdens they may incur.

The EPA advised interested parties on July 16, 1992 (57 FR 21592), of the categories considered as major and area sources of HAP, and the printing/publishing (surface coating) industry was listed as a category of both major and area sources. The EPA made significant effort to hear from all levels of interest and all segments of the rotogravure and wide-web flexographic printing industry. To facilitate comments and input, the EPA participated in numerous meetings with trade organizations representing all industry sectors affected by this rule. Throughout the regulatory development process, and more specifically, in consultation meetings, industry representatives from printing companies, ink manufacturers, and various trade associations were given an opportunity to comment on the proposed regulatory approach and the MACT alternatives being developed. The major topic areas resulting from these discussions included industry segmentation, the determination of the MACT floor, test methods, monitoring procedures, facility-wide averaging, compliance deadlines, and pollution prevention. Documentation of all meetings and public comments can be found in Docket A–92–42.

Representatives of State and local air pollution control agencies participated in all of the EPA work group meetings, and several State and local agencies submitted public comments in response to the proposed standards.

The EPA has considered the purpose and intent of Executive Order 12875 and has determined that printing and publishing NESHAP are needed. The rule is generally required by statute under section 112 of the CAA because printing and publishing facilities emit significant quantities of air pollutants. Through meetings and consultations during project development and proposal, efforts were made to inform entities of the costs required to comply with the regulation; in addition, modifications were made to reduce the burden to small entities.

E. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires the EPA to consider potential impacts of proposed regulations on small business ''entities.'' If a preliminary analysis indicates that a proposed regulation would have a significant economic impact on 20 percent or more of small entities, then a final Regulatory Flexibility Analysis

(RFA) must be prepared. The EPA's analysis of these impacts was summarized in the preamble to the proposed rule (60 FR 13664).

In addition, the EPA has a set of Regulatory Flexibility Guidelines (RFG), published in April 1992, that require the EPA to conduct a final RFA if any small business or small entity impacts occur resulting from a rule whose Start Action Notice (SAN) is approved after the date of publication of the EPA RFG. The SAN for this rule was approved before that date, thus the former Regulatory Flexibility Act guidelines hold. An RFA was conducted, however, as part of the larger economic impact analysis whose results were presented in the preamble to the proposed rule. The RFA prepared meets the EPA RFG as well as the original Regulatory Flexibility Act Guidelines. It also meets the analytical requirements of the Small Business Regulatory Enforcement Fairness Act of 1996.

This analysis found that the proposed rule would not have a significant economic impact on a substantial number of small entities. No comments were received on this analysis. The changes made in the final rule reduce the cost of achieving and demonstrating compliance for affected small and large entities. Therefore, pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this rule will not have a significant economic impact on a substantial number of small business entities.

F. Unfunded Mandates Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Pub.L. 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, the EPA generally must prepare a written statement including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires the EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before the EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA, a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of the EPA regulatory proposals with significant Federal intergovernmental mandates and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that the action promulgated today does not include a Federal mandate that may result in estimated costs of $100 million or more in any one year to either State, local, or tribal governments in the aggregate, or to the private sector. Therefore, the requirements of the UMRA do not apply to this action.

G. Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA)

Pursuant to Subtitle E of SBREFA, this rule, which is nonmajor, was submitted to Congress before publication in the Federal Register.

List of Subjects in 40 CFR parts 9 and 63

Environmental protection, Air pollution control, Hazardous substances, Reporting and recordkeeping requirements, Standard for printing and publishing industry.

Dated: May 15, 1996.

Carol M. Browner,

Administrator.

For reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is amended as follows:

PART 9—[AMENDED]

1. The authority citation for Part 9 continues to read as follows:

Authority: 7 U.S.C. 135 *et seq.*, 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 *et seq.*, 1311, 1313(d), 1314, 1318, 1321, 1326, 1330, 1342, 1344, 1345(d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 *et seq.*, 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

2. Section 9.1 is amended by adding a new entry to the table under the indicated heading in numerical order to read as follows:

§ 9.1 OMB approvals under the Paperwork Reduction Act.

* * * * *

40 CFR citation	OMB control No.
* * * * *	
National Emission Standards for Hazardous Air Pollutants for Source Categories [13]	
* * * * *	
63.829–63.830	2060–0335
* * * * *	

[3] The ICRs referenced in this section of the table encompass the applicable general provisions contained in 40 CFR part 63, subpart A, which are not independent information collection requirements.

PART 63—[AMENDED]

1. The authority citation for part 63 continues to read as follows:

Authority: Secs. 101, 112, 114, 116, 183(f) and 301 of the CAA, as amended (42 U.S.C. 7401, 7411, 7414, 7416, 7511b(f), 7601).

2. Part 63 is amended by adding a new subpart KK consisting of §§ 63.820 through 63.839 to read as follows:

Subpart KK—National Emission Standards for the Printing and Publishing Industry

Sec.
63.820 Applicability.
63.821 Designation of affected sources.
63.822 Definitions.
63.823 Standards: General.
63.824 Standards: Publication rotogravure printing.
63.825 Standards: Product and packaging rotogravure and wide-web flexographic printing.
63.826 Compliance dates.
63.827 Performance test methods.
63.828 Monitoring requirements.
63.829 Recordkeeping requirements.
63.830 Reporting requirements.
63.831 Delegation of Authority.
63.832—63.839 [Reserved]

Table 1 to Subpart KK—Applicability of General Provisions to Subpart KK

Appendix A to Subpart KK—Data Quality Objective and Lower Confidence Limit Approaches for Alternative Capture Efficiency Protocols and Test Methods

Subpart KK—National Emission Standards for the Printing and Publishing Industry

§ 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 (a)(2)(ii) of this section for purposes of establishing the facility to be an area source with respect to 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.

§ 63.821 Designation of affected sources.

(a) The affected sources subject to this subpart are:

(1) All of the publication rotogravure presses and all affiliated 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 paragraph (a)(3) of this section, except

(i) Proof presses, and

(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 work 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 five weight-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 coating equipment subject to the following provisions:

(i) Stand-alone coating equipment meeting any of the criteria specified in this subparagraph is eligible for inclusion:

(A) The stand-alone coating 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 coating 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 coating equipment and from one or more product and packaging rotogravure or wide-web flexographic printing presses;

(ii) All eligible stand-alone coating 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.

(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 source applies no more than 500 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 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.

§ 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.

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 outside laboratory that provides the organic HAP content of these materials, by weight, measured using Method 311 of appendix A of this Part 63 or an equivalent or alternative method (or formulation data as provided in § 63.827(b)) and the solids content of these materials, by weight, determined in accordance with § 63.827(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 operation means the application of a uniform layer of material across the entire width of a substrate.

Coating station means a work station on which a coating operation is conducted.

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 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.

Flexographic press means an unwind or feed section, 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 station. 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.

Flexographic print station means a work station on which a flexographic printing operation is conducted. A flexographic print station includes a flexographic printing plate which is an image carrier made of rubber or other elastomeric material. The image (type and art) to be printed is raised above the printing plate.

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.

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.

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, and pictures on a substrate other than fabric through the application of material to that substrate.

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 device used only to check the quality of the image formation of rotogravure cylinders or flexographic plates, which prints only non-saleable items.

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, a series of one or more 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 work station on which a rotogravure printing operation is conducted. A rotogravure print station includes a rotogravure cylinder and ink supply. 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 coating equipment means an unwind or feed section, a series of one or more coating 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, and

Is used to conduct one or more coating operations on a substrate. Stand-alone coating equipment

May or may not process substrate that is also processed by a product and packaging rotogravure or wide-web flexographic press, apply solids-containing materials that are also applied by a product and packaging rotogravure or wide-web flexographic press, and utilize a control device that is also utilized by a product and packaging rotogravure or wide-web flexographic press. Stand-alone coating equipment is sometimes referred to as ''off-line'' coating 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 a rotogravure or wide-web flexographic press where 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) C_i=the organic volatile matter concentration in ppm, dry basis, of compound i in the vent gas, as determined by Method 25 or Method 25A.

(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 total monthly organic HAP applied, 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) M_f=the total organic volatile matter mass flow rate, kg/h.

(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) MW_i=the molecular weight of compound i in the vent gas, kg/kg-mol.

(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) Q_{sd}=the volumetric flow rate of gases entering or exiting the control device, as determined by Method 2, dscm/h.

(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).

§ 63.823 Standards: General.

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.

§ 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:

$$R_e = (100)\frac{M_{vu} - M_{hu} + \left[(M_{vr})(M_{hu}/M_{vu})\right]}{M_{vu}} \qquad \text{Eq 1}$$

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 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 and summed) at both the inlet to and the outlet from the control device, such that the percent control efficiency (E) of the control device can be calculated for each 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.

$$R_e = (100)\frac{M_{vu} - M_{hu} + \left[(E/100)(F/100)M_{hu}\right]}{M_{vu}} \qquad \text{Eq 2}$$

(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).

(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 in accordance with the requirements of paragraph (b)(1)(ii) of this section.

(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.

§ 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 emissions to no more than five percent of the organic HAP applied for the month; or to no more than four 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.

$$C_{ahi} = \frac{\left(C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq 3}$$

(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

$$C_{asi} = \frac{C_{si}M_i}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq 4}$$

(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.

$$H_{si} = \frac{C_{ahi}}{C_{asi}} \qquad \text{Eq 5}$$

(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.

$$H_L = \frac{\sum_{i=1}^{p} M_i C_{hi} + \sum_{j=1}^{q} M_j C_{hj}}{\sum_{i=1}^{p} M_i + \sum_{j=1}^{q} M_j} \qquad \text{Eq 6}$$

(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.

$$H_S = \frac{\sum_{i=1}^{p} M_i C_{hi} + \sum_{j=1}^{q} M_j C_{hj}}{\sum_{i=1}^{p} M_i C_{si}} \qquad \text{Eq 7}$$

(6) Demonstrate that the total monthly organic HAP applied, H, as determined by Equation 8, is less than the calculated equivalent allowable organic HAP, H_a, as determined by paragraph (e) of this section.

$$H = \sum_{i=1}^{p} M_i C_{hi} + \sum_{j=1}^{q} M_j C_{hj} \qquad \text{Eq 8}$$

(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.

$$R_v = 100 \frac{M_{vr}}{\sum_{i=1}^{p} M_i C_{vi} + \sum_{j=1}^{q} M_j} \qquad \text{Eq 9}$$

(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.

$$H = \left[1 - \frac{R_v}{100}\right]\left[\sum_{i=1}^{p}\left(C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij}\right)\right] \qquad \text{Eq 10}$$

(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.

$$L = \frac{H}{\sum_{i=1}^{p} C_{si}M_i} \qquad \text{Eq 11}$$

(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.

$$S = \frac{H}{\sum_{i=1}^{p}\left[M_i + \sum_{j=1}^{q} M_{ij}\right]} \qquad \text{Eq 12}$$

(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 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 and summed) at both the inlet to and the outlet from the control device, such that the percent control efficiency (E) of the control device can be calculated for each 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.

$$R = \frac{EF}{100} \qquad \text{Eq 13}$$

(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.

$$H = \left[1 - \left(\frac{E}{100}\,\frac{F}{100}\right)\right]\left[\sum_{i=1}^{p}\left(C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij}\right)\right] \qquad \text{Eq 14}$$

(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.

$$L = \frac{H}{\sum_{i=1}^{p} C_{si}M_i} \qquad \text{Eq 15}$$

(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.

$$S = \frac{H}{\sum_{i=1}^{p}\left[M_i + \sum_{j=1}^{q} M_{ij}\right]} \qquad \text{Eq 16}$$

(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 solvent recovery 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. Compliance shall be demonstrated in accordance with the requirements of paragraph (c)(2) of this section.

(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.

$$H_a = 0.20\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.04\left[\sum_{i=1}^{p} M_i\left(1-G_i\right) + \sum_{j=1}^{q} M_{Lj}\right] \qquad \text{Eq 17}$$

(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.

$$H = \left[\sum_{i=1}^{p} M_{Ci}C_{hi} + \sum_{j=1}^{q} M_{Cj}C_{hj}\right]\left[1 - \frac{M_{vr}}{\sum_{i=1}^{p} M_{Ci}C_{vi} + \sum_{j=1}^{q} M_{Cj}}\right] + \left[\sum_{i=1}^{p} M_{Bi}C_{hi} + \sum_{j=1}^{q} M_{Bj}C_{hj}\right] \qquad \text{Eq 18}$$

(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).

$$H = \left[\sum_{i=1}^{p} M_{Ci}C_{hi} + \sum_{j=1}^{q} M_{Cj}C_{hj}\right]\left[1 - \left(\frac{E}{100}\,\frac{F}{100}\right)\right] + \left[\sum_{i=1}^{p} M_{Bi}C_{hi} + \sum_{j=1}^{q} M_{Bj}C_{hj}\right] \qquad \text{Eq 19}$$

(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.

§ 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.

(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 inlet and outlet total organic volatile matter concentration, and capture efficiency has been determined in accordance with the requirements of this subpart, such that an overall HAP control efficiency can be calculated, and

(ii) The continuous emission monitors are used to demonstrate continuous compliance in accordance with § 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 organic HAP content of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, diluents, and other materials for the purpose of meeting the requirements of § 63.824 shall be

conducted according to paragraph (b)(1) of this section. Determination of the organic HAP content of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, diluents, and other materials for the purpose of meeting the requirements of § 63.825 shall be conducted according to paragraph (b)(2) of this section.

(1) Each owner or operator of a publication rotogravure facility shall determine the organic HAP weight-fraction of each ink, coating, varnish, adhesive, primer, solvent, and other material used in a publication rotogravure affected source by following one of the procedures in paragraphs (b)(1)(i) through (b)(1)(iii) of this section:

(i) The owner or operator may test the material in accordance with Method 311 of appendix A of this Part 63. The Method 311 determination may be performed by the manufacturer of the material and the results provided to the owner or operator. If these values cannot be determined using Method 311, the owner or operator shall submit an alternative technique for determining their values for approval by the Administrator. The recovery efficiency of the technique must be determined for all of the target organic HAP and a correction factor, if necessary, must be determined and applied.

(ii) The owner or operator may determine the volatile matter content of the material in accordance with § 63.827(c)(1) and use this value for the organic HAP content for all compliance purposes.

(iii) The owner or operator may, except as noted in paragraph (b)(1)(iv) of this section, rely on formulation data provided by the manufacturer of the material on a CPDS if

(A) The manufacturer has included in the organic HAP content determination all HAP present at a level greater than 0.1 percent in any raw material used, weighted by the mass fraction of each raw material used in the material, and

(B) The manufacturer has determined the HAP content of each raw material present in the formulation by Method 311 of appendix A of this part 63, or by an alternate method approved by the Administrator, or by reliance on a CPDS from a raw material supplier prepared in accordance with § 63.827(b)(1)(iii)(A).

(iv) In the event of any inconsistency between the Method 311 of appendix A of this part 63 test data and formulation data, that is, if the Method 311 test value is higher, the Method 311 test data shall govern, unless after consultation, an owner or operator demonstrates to the satisfaction of the enforcement authority that the formulation data are correct.

(2) Each owner or operator of a product and packaging rotogravure or wide-web flexographic printing facility shall determine the organic HAP weight fraction of each ink, coating, varnish, adhesive, primer, solvent, thinner, reducer, diluent, and other material applied by following one of the procedures in paragraphs (b)(2)(i) through (b)(2)(iii) of this section:

(i) The owner or operator may test the material in accordance with Method 311 of appendix A of this part 63. The Method 311 determination may be performed by the manufacturer of the material and the results provided to the owner or operator. If these values cannot be determined using Method 311, the owner or operator shall submit an alternative technique for determining their values for approval by the Administrator. The recovery efficiency of the technique must be determined for all of the target organic HAP and a correction factor, if necessary, must be determined and applied.

(ii) The owner or operator may determine the volatile matter content of the material in accordance with § 63.827(c)(2) and use this value for the organic HAP content for all compliance purposes.

(iii) The owner or operator may, except as noted in paragraph (b)(2)(iv) of this section, rely on formulation data provided by the manufacturer of the material on a CPDS if

(A) The manufacturer has included in the organic HAP content determination, all organic HAP present at a level greater than 0.1 percent in any raw material used, weighted by the mass fraction of each raw material used in the material, and

(B) The manufacturer has determined the organic HAP content of each raw material present in the formulation by Method 311 of appendix A of this part 63, or, by an alternate method approved by the Administrator, or, by reliance on a CPDS from a raw material supplier prepared in accordance with § 63.827(b)(2)(iii)(A).

(iv) In the event of any inconsistency between the Method 311 of appendix A of this part 63 test data and a facility's formulation data, that is, if the Method 311 test value is higher, the Method 311 test data shall govern, unless after consultation, an owner or operator demonstrates to the satisfaction of the enforcement authority that the formulation data are correct.

(c) Determination by the owner or operator of the volatile matter content of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, diluents, and other materials used for the purpose of meeting the requirements of § 63.824 shall be conducted according to paragraph (c)(1) of this section. Determination by the owner or operator of the volatile matter and solids content of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, diluents, and other materials applied for the purpose of meeting the requirements of § 63.825 shall be conducted according to paragraph (c)(2) of this section.

(1) Each owner or operator of a publication rotogravure facility shall determine the volatile matter weight-fraction of each ink, coating, varnish, adhesive, primer, solvent, reducer, thinner, diluent, and other material used using Method 24A of 40 CFR part 60, appendix A. The Method 24A determination may be performed by the manufacturer of the material and the results provided to the owner or operator. 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. The owner or operator may rely on formulation data, subject to the provisions of paragraph (c)(3) of this section.

(2) Each owner or operator of a product and packaging rotogravure or wide-web flexographic printing facility shall determine the volatile matter and solids weight-fraction of each ink, coating, varnish, adhesive, primer, solvent, reducer, thinner, diluent, and other material applied using Method 24 of 40 CFR part 60, appendix A. The Method 24 determination may be performed by the manufacturer of the material and the results provided to the owner or operator. 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. The owner or operator may rely on formulation data, subject to the provisions of paragraph (c)(3) of this section.

(3) Owners or operators may determine the volatile matter content of materials based on formulation data, and may rely on volatile matter content data provided by material suppliers. In the event of any inconsistency between the formulation data and the results of Test Methods 24 or 24A of 40 CFR part 60, appendix A, the applicable test method shall govern, 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)–(C) 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 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 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, 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, regardless of inlet concentration.

(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:

$$M_f = Q_{sd}\left[\sum_{i=1}^{n} C_i MW_i\right]\left[0.0416\right]\left[10^{-6}\right] \qquad \text{Eq 20}$$

(ix) Emission control device efficiency shall be determined using Equation 21:

$$E = \frac{M_{fi} - M_{fo}}{M_{fi}} \qquad \text{Eq 21}$$

(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) For permanent total enclosures, capture efficiency shall be assumed as 100 percent. Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure as found in appendix B to § 52.741 of part 52 of this chapter shall be used to confirm that an enclosure meets the requirements for permanent total enclosure.

(2) For temporary total enclosures, the capture efficiency shall be determined according to the protocol specified in § 52.741(a)(4)(iii)(B) of part 52 of this chapter. The owner or operator 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.

§ 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 the total organic volatile matter concentration at both the control device inlet and the outlet.

(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.

§ 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 volume 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 volume 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.

§ 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).

(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) Start-up, shutdown, and malfunction reports specified in § 63.10(d)(5) of this part, except that the provisions in subpart A pertaining to start-ups, shutdowns, and malfunctions do not apply unless a control device is used to comply with this subpart.

(i) If actions taken by an owner or operator during a start-up, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are not completely consistent with the procedures specified in the source's start-up, shutdown, and malfunction plan specified in § 63.6(e)(3) of this part, the owner or operator shall state such information in the report. The start-up, shutdown, or malfunction report shall consist of a letter containing the name, title, and signature of the responsible official who is certifying its accuracy, that shall be submitted to the Administrator.

(ii) Separate start-up, shutdown, or malfunction reports are not required if the information is included in the report specified in paragraph (b)(6) of this section.

(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 six-month period). 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).

§ 63.831 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under 40 CFR part 63 subpart E of this part, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authority which will not be delegated to States: § 63.827(b), approval of alternate test method for organic HAP content determination; § 63.827(c), approval of alternate test method for volatile matter determination.

TABLE 1 TO SUBPART KK.—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(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.

TABLE 1 TO SUBPART KK.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART KK—Continued

General provisions reference	Applicable to subpart KK	Comment
§ 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.	
§ 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)	Yes	Provisions pertaining to start-ups, shutdowns, malfunctions, and CMS do not apply unless an add-on control system is used.
§ 63.6(f)	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	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.
§ 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)–(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.	
§ 63.10(a)	Yes.	
§ 63.10(b)(1)–(b)(3)	Yes.	
§ 63.10(c)(1)	Yes.	
§ 63.10(c)(2)–(c)(4)	No	Sections reserved.
§ 63.10(c)(5)–(c)(8)	Yes.	
§ 63.10(c)(9)	No	Section reserved.
§ 63.10(c)(10)–(c)(15)	Yes.	
§ 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)–(d)(5)	Yes.	
§ 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.	

Appendix A to Subpart KK—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.

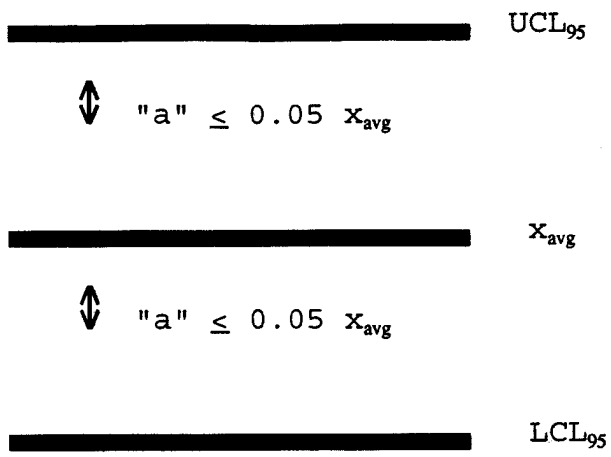
2.6 If the source can demonstrate to the regulatory agency that a test run should not be considered due to an identified testing or analysis error such as spillage of part of the sample during shipping or an upset or improper operating conditions that is not considered part of normal operation then the 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:

$$P = \frac{a}{x_{avg}} 100 \qquad \text{Eq 1}$$

$$a = \frac{t_{0.975}\, s}{\sqrt{n}} \qquad \text{Eq 2}$$

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 confidence level (see Table 1).

x_{avg}=average measured CE value (calculated from all valid test runs).

x_i=the CE value calculated from the ith test run.

Number of valid test runs, n	$t_{0.975}$	$t_{0.90}$	Number of valid test runs, n	$t_{0.975}$	$t_{0.90}$
1 or 2	N/A	N/A	12	2.201	1.363
3	4.303	1.886	13	2.179	1.356
4	3.182	1.638	14	2.160	1.350
5	2.776	1.533	15	2.145	1.345
6	2.571	1.476	16	2.131	1.341
7	2.447	1.440	17	2.120	1.337
8	2.365	1.415	18	2.110	1.333
9	2.306	1.397	19	2.101	1.330
10	2.262	1.383	20	2.093	1.328
1	12.228	1.372	21	2.086	1.325

Table 1.—T-Values

3.3 The sample standard deviation and average CE value are calculated using Equations 3 and 4 as follows:

$$s = \left[\frac{\sum_{i=1}^{n} \left(x_i - x_{avg} \right)^2}{n-1} \right]^{0.5} \qquad \text{Eq 3}$$

$$x_{avg} = \frac{\sum_{i=1}^{n} x_i}{n} \qquad \text{Eq 4}$$

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

$$a = \frac{(4.30)(4.51)}{\sqrt{n}} = 11.20 \qquad \text{Eq 5}$$

$$P = \frac{11.2}{100.8}100 = 11.11 \qquad \text{Eq 6}$$

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

$$a = \frac{(2.57)(6.11)}{\sqrt{6}} = 6.41 \qquad \text{Eq 7}$$

$$P = \frac{6.41}{96.6}100 = 6.64 \qquad \text{Eq 8}$$

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

$$a = \frac{(2.31)(5.33)}{\sqrt{9}} = 4.10 \qquad \text{Eq 9}$$

$$P = \frac{4.10}{95.7}100 = 4.28 \qquad \text{Eq 10}$$

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 a 80 percent (two-sided) confidence level as follows using Equation 11:

$$LC_1 = x_{avg} - \frac{t_{0.90}s}{\sqrt{n}} \qquad \text{Eq 11}$$

Where:

LC_1=LCL at a 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 3–1).
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

$$LC_1 = 94.1 - \frac{(1.886)(3.55)}{\sqrt{3}} = 90.23 \qquad \text{Eq 12}$$

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.

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