



# Federal Register

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**Wednesday,  
December 4, 2002**

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**Part III**

## **Environmental Protection Agency**

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**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 <sup>a</sup> 322221 322222 <sup>a</sup> 322223 <sup>a</sup> 322224 322225 322226 <sup>a</sup> 322299 323111 323116 325992 326111 326112 <sup>a</sup> 326113 32613 326192 <sup>a</sup> 32791 332999 339944	Those facilities with web coating operations <sup>b</sup> 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.

<sup>a</sup>Facilities in these NAICS codes are expected to be primarily covered under the printing and publishing NESHAP.

<sup>b</sup>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?
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- VIII. What Are the Environmental, Energy, and Economic Impacts of the Rule?
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- 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 1996 (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 ( $M_{ret}$ ) 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 to 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 1996 (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](mailto: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  $\pm 1$  percent of the temperature being monitored in degrees Celsius, or  $\pm 1^\circ$  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  $\pm 1$  percent of the temperature being monitored in degrees Celsius or  $\pm 1$  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:

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

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 ( $\text{mol}/\text{m}^3$ ) (@ 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. (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).  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:
	<p>(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.</p> <p>(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.</p> <p>(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.</p>	<p>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).</p> <p>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).</p> <p>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).</p>
(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	<p>(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.</p> <p>(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;.</p> <p>(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.</p> <p>(iv) Overall organic HAP emission rate does not exceed the calculated limit based on emission limitations.</p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
(5) Use of multiple capture and/or control devices.	<p>(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.</p> <p>(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.</p> <p>(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.</p>	<p>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).</p> <p>Follow the procedures set out in § 63.3370(f) to determine compliance with § 63.3320(b)(3) according to § 63.3370(n).</p> <p>Follow the procedures set out in § 63.3370(g) to determine compliance with § 63.3320(b)(2) according to § 63.3370(n).</p>

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
(6) Use of a combination of compliant coatings and control devices.	<p>(iv) Average equivalent organic HAP emission rate does not exceed the calculated limit based on emission limitations.</p> <p>(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.</p> <p>(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.</p> <p>(iii) Average equivalent organic HAP emission rate does not exceed the calculated limit based on emission limitations.</p>	<p>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).</p> <p>Follow the procedures set out in § 63.3370(f) to determine compliance with § 63.3320(b)(3) according to § 63.3370(n).</p> <p>Follow the procedures set out in § 63.3370(g) to determine compliance with § 63.3320(b)(2) according to § 63.3370(n).</p> <p>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).</p>

(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 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:

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

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:

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

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:

$$C_{asi} = \frac{C_{si}M_i + \sum_{j=1}^q C_{sij}M_{ij}}{M_i + \sum_{j=1}^q M_{ij}} \quad \text{Eq. 2}$$

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:

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

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:

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

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:

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

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:

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

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:

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

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:

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

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 (1) 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:

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

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:

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

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:

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

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:

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

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:

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

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:

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

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 resubmitted 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).  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 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.  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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