



# Federal Register

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**Friday,  
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**Part IV**

## **Environmental Protection Agency**

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**40 CFR Part 63**

**National Emission Standards for  
Hazardous Air Pollutants: Surface Coating  
of Wood Building Products; Proposed  
Rule**

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 63**

[FRL-7223-7]

RIN 2060-AH02

**National Emission Standards for Hazardous Air Pollutants: Surface Coating of Wood Building Products****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Proposed rule.

**SUMMARY:** This action proposes national emission standards for hazardous air pollutants (NESHAP) for wood building products surface coating operations. The EPA estimates that there are approximately 205 major source facilities in the wood building products (surface coating) source category that emit hazardous air pollutants (HAP), such as xylene, toluene, ethyl benzene, ethylene glycol butyl ether (EGBE), other glycol ethers, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), methanol, styrene, and formaldehyde. As proposed, the standards are estimated to reduce HAP emissions by 3,200 megagrams per year (Mg/yr) (3,500 tons per year (tpy)) or by 61 percent. The reduction in HAP emissions would be achieved by requiring all major source facilities that apply a surface coating to a wood building product to meet the HAP emission standards reflecting the application of the maximum achievable control technology (MACT).

**DATES:** *Comments.* Submit comments on or before August 20, 2002.

*Public Hearing.* If anyone contacts the EPA requesting to speak at a public hearing, they should do so by July 11, 2002. If requested, a public hearing will be held within approximately 30 days following publication of this notice in the **Federal Register**.

**ADDRESSES:** *Comments.* By U.S. Postal Service, send comments (in duplicate if possible) to: Air and Radiation Docket and Information Center (6102), Attention Docket Number A-97-52, U.S. EPA, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. In person or by courier, deliver comments (in duplicate if possible) to: Air and Radiation Docket and Information Center (6102), Attention Docket Number A-97-52, U.S. EPA, 401 M Street, SW, Room M-1500, Washington, DC 20460. The EPA requests a separate copy also be sent to the contact person listed in **FOR FURTHER INFORMATION CONTACT**.

*Public Hearing.* If a public hearing is held, it will be held at our Office of

Administration auditorium in Research Triangle Park, North Carolina. You should contact Ms. Janet Eck, Coatings and Consumer Product Group, Emission Standards Division (C539-03), U.S. EPA, Research Triangle Park, North Carolina 27711, telephone number (919) 541-7946, to request to speak at a public hearing or to find out if a hearing will be held.

*Docket.* Docket No. A-97-52 contains supporting information used in developing the proposed standards. The docket is located at the U.S. EPA, 401 M Street, SW, Washington, DC 20460 in Room M-1500, Waterside Mall (ground floor), 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. Vinson Hellwig, Coatings and Consumer Products Group, Emissions Standards Division (C539-03), U.S. EPA, Research Triangle Park, North Carolina 27711; telephone number (919) 541-2317; facsimile number (919) 541-5689; electronic mail (e-mail) address: hellwig.vinson@epa.gov.

**SUPPLEMENTARY INFORMATION:**

*Comments.* Comments and data may be submitted by e-mail to: a-and-r-docket@epa.gov. Electronic comments must be submitted as an ASCII file to avoid the use of special characters and encryption problems and will also be accepted on disks in WordPerfect® file format. All comments and data submitted in electronic form must note the docket number: A-97-52. No confidential business information (CBI) should be submitted by e-mail. Electronic comments may be filed online at many Federal Depository Libraries.

Commenters wishing to submit proprietary information for consideration must clearly distinguish such information from other comments and clearly label it as CBI. Send submissions containing such proprietary information directly to the following address, and not to the public docket, to ensure that proprietary information is not inadvertently placed in the docket: Mr. Vinson Hellwig, c/o OAQPS Document Control Officer (C404-02), U.S. EPA, Research Triangle Park, NC 27711. The EPA will disclose information identified as CBI only to the extent allowed by the procedures set forth in 40 CFR part 2. If no claim of confidentiality accompanies a submission when it is received by EPA, the information may be made available to the public without further notice to the commenter.

*Public Hearing.* Persons interested in presenting oral testimony or inquiring

as to whether a hearing is to be held should contact Ms. Janet Eck, Coatings and Consumer Products Group, Emission Standards Division (C539-03), U.S. EPA, Research Triangle Park, NC 27711; telephone number (919) 541-7946 at least 2 days in advance of the public hearing. Persons interested in attending the public hearing should also contact Ms. Eck at least 2 days in advance of the public hearing to verify the time, date, and location of the hearing. The public hearing will provide interested parties the opportunity to present data, views, or arguments concerning the proposed emission standards.

*Docket.* The docket is an organized and complete file of all the information considered by the EPA in the development of this rulemaking. The docket is a dynamic file 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 Clean Air Act (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) 260-7548. A reasonable fee may be charged for copying docket materials.

*World Wide Web (WWW).* In addition to being available in the docket, an electronic copy of this proposed rule will also be available on the WWW through the Technology Transfer Network (TTN). Following signature by the Administrator, a copy of the proposed 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.* The source category, which is divided into the five subcategories listed in Table 1, includes facilities that apply coatings to wood building products. In general, facilities that coat wood building products are covered under the Standard Industrial Classification (SIC) and North American Industrial Classification System (NAICS) codes listed in Table 1.

However, facilities classified under other SIC or NAICS codes may be subject to the proposed standards. Not

all facilities classified under the SIC and NAICS codes in Table 1 will be subject to the proposed standards because some

of the classifications cover products outside the scope of the NESHAP for wood building products.

TABLE 1.—SUBCATEGORIES AND ENTITIES POTENTIALLY REGULATED BY THE PROPOSED STANDARDS

Subcategory	SIC	NAICS	Examples of regulated entities include those facilities that apply a surface coating to . . .
1. Doors and Windows	2431, 2499 <sup>a</sup>	321911, 321918, 321999 <sup>a</sup>	Doors and windows and any millwork and moulding associated with doors and windows.
2. Flooring	2426, 2421, 2499 <sup>a</sup>	321918, 321999 <sup>a</sup>	Solid wood flooring, engineered wood flooring, laminated flooring, and any millwork or moulding associated with flooring.
3. Interior Wall Paneling and Tileboard.	2435, 2499 <sup>a</sup>	321211, 321999 <sup>a</sup>	Interior wall paneling or tileboard.
4. Other Interior Panels	2435, 2436, 2493, 2499 <sup>a</sup>	321211, 321212, 321219, 321999 <sup>a</sup>	Panels used for purposes other than interior wall paneling, such as sheathing, insulation board, pegboard, and ceiling tiles.
5. Exterior Siding, Doorskins, and Miscellaneous.	2435, 2493, 2499 <sup>a</sup>	321211, 321219, 321999 <sup>a</sup>	Panel siding, trimboard, lap siding, trim associated with siding, doorskins, and other miscellaneous wood products.

<sup>a</sup> The subcategory of the SIC code and NAICS code depends on the final end use of the product.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding subcategories and entities likely to be regulated by this action. To determine whether your coating operation is regulated by this action, you should examine the applicability criteria in § 63.4681 of the proposed rule. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

*Background Information Document and Economic Impact Analysis.* The Background Information Document (BID) and the Economic Impact Analysis (EIA) for the proposed rule may be obtained from the TTNWeb; the wood building products (surface coating) docket (A-97-52); the EPA Library (MD-35), Research Triangle Park, North Carolina 27711, telephone (919) 541-2777; or the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161, telephone (703) 487-4650. Please refer to “Background Information Document—National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Wood Building Products (Surface Coating) Industry” (EPA-453/R-00-003) and the “Industry Profile: Wood Building Products Industry” (EPA-453/R-01-002).

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

I. Background

- A. What is the source of authority for development of NESHAP?
- B. What criteria are used in the development of NESHAP?

- C. What are the health effects associated with HAP emissions from surface coating of wood building products?

II. Summary of the Proposed Rule

- A. What source categories and subcategories are affected by the proposed rule?
- B. What is the relationship to other rules?
- C. What are the primary sources of emissions and what are the emissions?
- D. What is the affected source?
- E. What are the emission limits, operating limits, and work practice standards?
- F. When must I comply with the proposed rule?
- G. What are the testing and initial compliance requirements?
- H. What are the continuous compliance provisions?
- I. What are the notification, recordkeeping, and reporting requirements?

III. Rationale for Selecting the Proposed Standards

- A. How did we select the source category and subcategories?
- B. How did we select the regulated pollutants?
- C. How did we select the affected source?
- D. How did we determine the basis and level of the proposed standards for new or reconstructed and existing sources?
- E. How did we select the format of the proposed standards?
- F. How did we select the testing and initial compliance requirements?
- G. How did we select the proposed continuous compliance requirements?
- H. How did we select notification, recordkeeping, and reporting requirements?

IV. Summary of Environmental, Energy, and Economic Impacts

- A. What are the air impacts?
- B. What are the cost impacts?
- C. What are the economic impacts?
- D. What are the non-air health, environmental, and energy impacts?

V. Administrative Requirements

- A. Executive Order 12866, Regulatory Planning and Review
- B. Executive Order 13132, Federalism
- C. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments
- D. Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks
- E. Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or 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

I. Background

*A. What Is the Source of Authority for Development of NESHAP?*

Section 112 of the CAA requires us to list categories and subcategories of major sources and area sources of HAP and to establish NESHAP for the listed source categories and subcategories. The Flatwood Paneling (Surface Coating) category of major sources was listed on July, 16, 1992 (57 FR 31576) under the Surface Coating Processes industry group. The name of the source category was subsequently changed to Wood Building Products (Surface Coating) on November 18, 1999 (64 FR 63025) to reflect more accurately the types of surface coating operations currently used in the industry. Major sources of HAP are those that emit or have the

potential to emit equal to or greater than 9.1 Mg/yr (10 tpy) of any one HAP or 22.7 Mg/yr (25 tpy) of any combination of HAP.

*B. What Criteria Are Used in the Development of NESHAP?*

Section 112 of the CAA requires that we establish NESHAP for the control of HAP from both new or reconstructed and existing major sources. The CAA requires the NESHAP to reflect the maximum degree of reduction in emissions of HAP that is achievable. This level of control is commonly referred to as the MACT.

The MACT floor is the minimum control level allowed for NESHAP and is defined under section 112(d)(3) of the CAA. In essence, the MACT floor ensures that the standard is set at a level that assures that all major sources achieve the level of control at least as stringent as that already achieved by the better-controlled and lower-emitting sources in each source category or subcategory. For new or reconstructed sources, the MACT floor cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than standards for new or reconstructed sources, but they cannot be less stringent than the average emission limit achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources).

In developing MACT, we also consider control options that are more stringent than the floor. We may establish standards more stringent than the floor based on the consideration of the cost of achieving the emission reductions, any non-air quality health and environmental impacts, and energy requirements.

*C. What Are the Health Effects Associated With HAP Emissions From Surface Coating of Wood Building Products?*

The primary HAP emitted from the surface coating of wood building products include xylene, toluene, ethyl benzene, EGBE, and glycol ethers (not including EGBE). These compounds account for more than 84 percent of the nationwide HAP emissions from this source category. Other HAP identified in emissions include MEK, MIBK, methanol, styrene, and formaldehyde. The HAP that would be controlled with the proposed rule are associated with a variety of adverse health effects. These adverse health effects include chronic

health disorders (e.g., irritation of the lungs, eyes, and mucus membranes and effects on the central nervous system) and acute health disorders (e.g., lung irritation and congestion, alimentary effects such as nausea and vomiting, and effects on the central nervous system).

We do not have the type of current detailed data on each of the facilities covered by the proposed emission standards for this subcategory and the people living around the facilities that would be necessary to conduct an analysis to determine the actual population exposures to the HAP emitted from these facilities and potential for resultant health effects. Therefore, we do not know the extent to which the adverse health effects described above occur in the populations surrounding these facilities. However, to the extent the adverse effects do occur, the proposed rule would reduce emissions and subsequent exposures.

**II. Summary of the Proposed Rule**

*A. What Source Categories and Subcategories Are Affected by the Proposed Rule?*

The proposed rule would apply to you if you own or operate a wood building products surface coating facility that uses at least 4,170 liters (1,100 gallons (gal)) of coatings per year and is a major source, is located at a major source, or is part of a major source of HAP emissions, whether or not you manufacture the wood building product substrate. The surface coating operations are not required to be major sources of HAP emissions in order for the surface coating operations at a major source facility to be covered by the proposed rule. As long as some part of the total facility causes it to be a major source (e.g., the wood substrate manufacturing process), the surface coating operations would be subject to the proposed standards.

We have defined a wood building products surface coating facility as any facility engaged in the finishing or laminating of a wood building product. A wood building product is any product that contains more than 50 percent by weight wood or wood fiber and is used in the construction, either interior or exterior, of a residential, commercial, or institutional building. As explained later, we have established five subcategories in the wood building products surface coating source category, including: (1) Doors and windows; (2) flooring; (3) interior wall paneling and tileboard; (4) other interior panels; and (5) exterior siding,

doorskins, and miscellaneous (see Table 1 of this preamble).

Facilities that manufacture or apply surface coatings to prefabricated/premanufactured or mobile/modular homes are not subject to the proposed NESHAP requirements. These facilities were found to have very low -or no-HAP emissions because coatings applied to these homes are typically waterborne (latex) formulations. Based on the data submitted by 70 of these facilities, no major sources of HAP emissions were identified in the database (docket A-97-52).

You would not be subject to the proposed rule if your wood building products surface coating facility is located at an area source. An area source of HAP is any facility that has the potential to emit HAP but is not a major source. You may establish area source status by limiting the source's potential to emit HAP through appropriate mechanisms available through the permitting authority.

The source category does not include research or laboratory facilities; janitorial, building, and facility construction or maintenance operations; or hobby shops that are operated for personal rather than for commercial purposes. The source category also does not include coating applications using handheld nonrefillable aerosol containers.

*B. What Is the Relationship to Other Rules?*

Affected sources subject to the proposed rule may also be subject to other rules. We specifically request comments on how monitoring, recordkeeping, and reporting requirements can be consolidated for sources that are subject to more than one rule.

Some wood building products surface coating facilities also manufacture the substrate that is subsequently coated. Any process associated with wood building products substrate manufacturing would be subject to the future NESHAP for plywood and composite wood products (future 40 CFR part 63, subpart DDDD).

Some wood building products surface coating facilities manufacture products that are used in the production of wood furniture or wood furniture components. These wood building products are subject to the NESHAP for wood furniture manufacturing operations (40 CFR part 63, subpart JJ). The surface coating of millwork and trim associated with cabinet manufacturing is also covered under the wood furniture NESHAP.

Wood treatment and preservation operations, which were delisted from the source category list, would not be subject to the wood building products (surface coating) NESHAP. Wood treatment and preservation operations include wood treatment or fire retardant operations located at wood building product facilities that involve impregnating the wood product with the wood treatment chemicals or fire retardant by using a retort or other pressure vessel. This includes operations that are normally not considered coating operations. We request specific comments on the wood treatment and fire retardant operations.

*C. What Are the Primary Sources of Emissions and What Are the Emissions?*

Emissions from coating application and drying/curing account for most of the HAP emissions from wood building products surface coating operations. The remaining emissions are primarily from mixing and/or thinning and cleaning operations. In most cases, HAP emissions from surface preparation, storage, handling, and waste/wastewater operations are relatively small.

Available emission data collected during the development of the proposed NESHAP show that the primary organic HAP emitted from the surface coating of wood building products includes xylene, toluene, ethyl benzene, EGBE, and other glycol ethers. These compounds account for 84 percent of this source category's nationwide organic HAP emissions. Other significant organic HAP identified include MEK, MIBK, methanol, styrene, and formaldehyde.

Based on information reported in survey responses during the development of the proposed NESHAP, inorganic HAP, including chromium, manganese, and antimony compounds, are components of some coatings used by this source category. No inorganic HAP were reported in thinners or cleaning materials. Most of the coating operations do not cause the coating material to become airborne. Where spraying is performed, most of the inorganic HAP components remain as solids in the dry coating film on the parts being coated or are deposited on the walls, floor, and grates of the spray booths in which they are applied. Some of the inorganic HAP particles are entrained in the spray booth exhaust air. Spray booths in the wood building products industry typically have either water curtains or dry filters to remove overspray particles. Therefore, inorganic HAP emission levels are expected to be very low and have not been quantified.

*D. What Is the Affected Source?*

We define an affected source as a stationary source, a group of stationary sources, or part of a stationary source to which a specific emission standard applies. The proposed rule defines the affected source as the collection of all operations associated with the surface coating of wood building products. These operations include preparation of a coating for application (e.g., mixing with thinners); surface preparation of the wood building products; coating application, curing, and drying equipment; equipment cleaning; and storage, transfer, and handling of coatings, thinners, cleaning materials, and waste materials.

*E. What Are the Emission Limits, Operating Limits, and Work Practice Standards?*

*Emission Limits.* We are proposing to limit organic HAP emissions from each new or reconstructed affected source using the emission limits in Table 2. The proposed emission limits for each existing affected source are given in Table 3. These limits are based on five subcategories that group similar operations and types of coatings. We request specific comments on the proposed emission limits for both existing and new or reconstructed sources for these subcategories. You can choose from several compliance options in the proposed rule to achieve the emission limits. You could comply by applying materials (coatings, thinners, and cleaning materials) that meet the emission limits, either individually or collectively. You could also use a capture system and add-on control device to meet the emission limits or comply by using a combination of both approaches.

Some wood building products facilities surface coat more than one product, and occasionally the products are in different subcategories. For purposes of the proposed standards, those affected sources coating multiple products covered by two or more subcategories must maintain product-or subcategory-specific records in order to demonstrate compliance with each applicable emission limit for all products coated at the affected source.

TABLE 2.—EMISSION LIMITS FOR NEW OR RECONSTRUCTED AFFECTED SOURCES

For any affected source applying coating to. . .	The organic HAP emission limit you must meet, in kilograms (kg) HAP/liter solids applying (pounds (lb) HAP/gal solids), is:
1. Doors and windows .....	0.06 (0.48)
2. Flooring .....	0.00 (0.00)
3. Interior wall paneling or tileboard .....	0.00 (0.04)
4. Other interior panels .....	0.00 (0.00)
5. Exterior siding, doorskins, and miscellaneous .....	0.00 (0.00)

TABLE 3.—EMISSION LIMITS FOR EXISTING AFFECTED SOURCES

For any affected source applying coating to. . .	The organic HAP emission limit you must meet, in kg HAP/liter solids (lb HAP/gal solids), is:
1. Doors and windows .....	0.17 (1.45)
2. Flooring .....	0.09 (0.78)
3. Interior wall paneling or tileboard .....	0.18 (1.53)
4. Other interior panels .....	0.00 (0.01)
5. Exterior siding, doorskins, and miscellaneous .....	0.01 (0.06)

*Operating Limits.* If you reduce emissions by using a capture system and add-on control device (other than a solvent recovery system for which you conduct a liquid-liquid material balance), the proposed operating limits would apply to you. These limits are site-specific parameter limits you determine during the initial performance test of the system. For capture systems that are not permanent total enclosures (PTE), you would establish average volumetric flow rates or duct static pressure limits for each capture device (or enclosure) in each capture system. For capture systems that are PTE, you would establish limits on average facial velocity or pressure drop across openings in the enclosure.

For thermal oxidizers, you would monitor the combustion temperature. For catalytic oxidizers, you would monitor the temperature immediately before and after the catalyst bed, or you would monitor the temperature before the catalyst bed and implement a site-specific inspection and maintenance plan for the catalytic oxidizer. For carbon adsorbers for which you do not conduct a liquid-liquid material

balance, you would monitor the carbon bed temperature and the amount of steam or nitrogen used to desorb the bed. For condensers, you would monitor the outlet gas temperature from the condenser. For concentrators, you would monitor the temperature of the desorption concentrate stream and the pressure drop of the dilute stream across the concentrator.

All site-specific parameter limits that you establish must reflect operation of the capture system and control devices during a performance test that demonstrates achievement of the emission limits during representative operating conditions. We request specific comments on the proposed operating limits for this source category.

**Work Practice Standards.** If you use an emission capture system and control device for compliance, you would be required to develop and implement a work practice plan to minimize organic HAP emissions from mixing operations, storage tanks and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. The work practice plan must include steps to ensure that, at a minimum: All organic HAP coatings, thinners, cleaning materials, and waste materials must be stored in closed containers; spills of organic HAP coatings, thinners, cleaning materials, and waste materials must be minimized; organic HAP coatings, thinners, cleaning materials, and waste materials must be conveyed from one location to another in closed containers or pipes; mixing vessels which contain organic HAP coatings and other materials must be closed except when adding to, removing, or mixing the contents; and emissions of organic HAP must be minimized during cleaning of storage, mixing, and conveying equipment.

If your affected source has an existing documented plan that incorporates steps taken to minimize emissions from the aforementioned sources, then your existing plan could be used to satisfy the requirement for a work practice plan.

If you use a capture system and control device for compliance, you would be required to develop and operate according to a startup, shutdown, and malfunction plan (SSMP) during periods of startup, shutdown, or malfunction of the capture system and control device.

The General Provisions (40 CFR part 63, subpart A) also would apply to you as indicated in the proposed rule. The General Provisions codify certain procedures and criteria for all 40 CFR part 63 NESHAP. The General Provisions contain administrative

procedures, preconstruction review procedures for new sources, and procedures for conducting compliance-related activities such as notifications, reporting and recordkeeping, performance testing, and monitoring. The proposed rule refers to individual sections of the General Provisions to emphasize key sections that are relevant. However, unless specifically overridden in the proposed rule, all of the applicable General Provisions requirements would apply to you.

#### *F. When Must I Comply With the Proposed Rule?*

Existing wood building products facilities must comply within 3 years of the date the promulgated rule is published in the **Federal Register**. New sources that commence construction after today's date must comply immediately upon initial startup or the effective date of the rule, whichever is later.

#### *G. What Are the Testing and Initial Compliance Requirements?*

New or reconstructed affected sources would have to be in compliance upon initial startup of the affected source or by the effective date of the final rule, whichever is later. Existing affected sources would have to be in compliance with the final standards no later than 3 years after the effective date of the final rule. The effective date is the date on which the final rule is published in the **Federal Register**.

Compliance with the emission limits is based on a rolling 12-month organic HAP emission rate determined each month. Each 12-month period is a compliance period. The initial compliance period, therefore, is the 12-month period beginning on the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period begins on the compliance date and extends through the end of that month plus the following 12 months. We have defined "month" as a calendar month or a pre-specified period of 28 to 35 days to allow for flexibility at sources where data are based on a business accounting period.

Being "in compliance" means that the owner or operator of the affected source meets the requirements to achieve the proposed emission limitations during the initial compliance period. At the end of the initial compliance period, the owner or operator would use the data and records generated to determine whether or not the affected source is in compliance with the organic HAP emission limit and other applicable requirements for that period. If the

affected source does not meet the applicable limits and other requirements, it is out of compliance for the entire initial compliance period. We welcome specific comments on the compliance dates and the data collection activities required for the initial compliance period.

**Emission Limits.** There are several proposed options for complying with the proposed emission limits, and the testing and initial compliance requirements vary accordingly. You would be able to use different compliance options for different coating operations in the affected source and also for the same coating operation at different times.

**Option 1: Compliance based on the compliant material option.** If you demonstrate compliance based on the compliant material option, you would determine the mass of organic HAP in all coatings, thinners, and cleaning materials used and the volume fraction of coating solids in all coatings used each month during the initial compliance period. You would be required to demonstrate that the organic HAP content of each coating meets the applicable emission limit and that you use no organic HAP thinners or cleaning materials.

To determine the mass fraction of organic HAP in coatings, thinners, and cleaning materials and the volume fraction of coating solids, you could either rely on manufacturer's data or on test results using the test methods listed below. You may use alternative test methods provided you get EPA approval in accordance with the NESHAP General Provisions in 40 CFR 63.7(f). However, if there is any inconsistency between the test method results (either EPA's or an approved alternative) and manufacturer's data, the test method results would prevail for compliance and enforcement purposes:

- For mass fraction of organic HAP, use Method 311 of 40 CFR part 63, appendix A;
- The proposed rule would allow you to use nonaqueous volatile matter as a surrogate for organic HAP, which would include all organic HAP plus all other organic compounds, and excluding water. If you choose this option, then you would use Method 24 of 40 CFR part 60, appendix A; and
- For volume fraction of coating solids, use either information from the supplier or manufacturer of the material, ASTM Method D2697-86 (1998), or ASTM Method D6093-97.

To demonstrate initial compliance based on the material used, you would be required to demonstrate that the organic HAP content of each coating

meets the applicable emission limit and that you use no organic HAP thinners or cleaning materials.

*Option 2: Compliance based on the emission rate without add-on controls option.* If you demonstrate compliance based on the emission rate without add-on controls option, you would determine the mass fraction of organic HAP in all coatings, thinners, and cleaning materials and the volume fraction of coating solids used each month during the initial compliance period. You would use the same methods as described above for Option 1. You would also:

- Determine the quantity of each coating, thinner, and cleaning material used.
- Calculate the total mass of organic HAP in all materials and total volume of coating solids used each month. You may subtract the total mass of organic HAP contained in waste materials you send to a hazardous waste treatment, storage, and disposal facility regulated under 40 CFR part 262, 264, 265, or 266.

- Calculate the total mass of organic HAP emissions and total volume of coating solids for the initial compliance period by adding together all the monthly values for mass of organic HAP and for volume of coating solids for the 12 months in the initial compliance period.

- Calculate the ratio of the total mass of organic HAP for the materials used to the total volume of coating solids used for the initial compliance period.

- Record the calculations and results and include them in your Notification of Compliance Status.

*Option 3: Compliance based on the emission rate with add-on controls option.* If you use a capture system and add-on control device, other than a solvent recovery system for which you conduct a liquid-liquid material balance, your testing and initial compliance requirements are as follows:

- Conduct an initial performance test to determine the capture and control efficiencies of the equipment and to establish operating limits to be achieved on a continuous basis. The performance test would have to be completed by the compliance date for existing sources and no later than 180 days after the compliance date for new or reconstructed affected sources.

- Determine the mass fraction of organic HAP in each material and the volume fraction of coating solids for each coating used each month of the initial compliance period.

- Calculate the total mass of organic HAP in all materials and total volume of coating solids used each month in the coating operation or group of coating

operations. You may subtract from the total mass of organic HAP the amount contained in waste materials you send to a hazardous waste treatment, storage, and disposal facility regulated under 40 CFR part 262, 264, 265, or 266.

- Calculate the organic HAP emission reductions for the controlled coating operations using the capture and control efficiencies determined during the performance test and the total mass of organic HAP in materials used in controlled coating operations.

- Calculate the total mass of organic HAP emissions and total volume of coating solids for the initial compliance period by adding together all monthly values for mass of organic HAP and for volume of coating solids for the 12 months in the initial compliance period.

- Calculate the ratio of the total mass of organic HAP emissions to the total volume of coating solids used during the initial compliance period.

- Record the calculations and results and include them in the Notification of Compliance Status.

If you use a capture system and add-on control device, other than a solvent recovery system for which you conduct liquid-liquid material balances, you would determine both the efficiency of the capture system and the emission reduction efficiency of the control device. To determine the capture efficiency, you would either verify the presence of a PTE using EPA Method 204 of 40 CFR part 51, appendix M (and all materials must be applied and dried within the enclosure); or use one of the protocols in § 63.4765 of the proposed rule to measure capture efficiency. If you have a PTE and all the materials are applied and dried within the enclosure and you route all exhaust gases from the enclosure to a control device, then you would assume 100 percent capture.

To determine the emission reduction efficiency of the control device, you would conduct measurements of the inlet and outlet gas streams. The test would consist of three runs, each run lasting at least 1 hour, using the following EPA Methods in 40 CFR part 60, appendix A:

- Method 1 or 1A for selection of the sampling sites.
- Method 2, 2A, 2C, 2D, 2F, or 2G to determine the gas volumetric flow rate.
- Method 3, 3A, or 3B for gas analysis to determine dry molecular weight.
- Method 4 to determine stack moisture.

- Method 25 or 25A to determine organic volatile matter concentration. 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, and

approved by the Administrator, could be used.

If you use a solvent recovery system, you could determine the overall control efficiency using a liquid-liquid material balance instead of conducting an initial performance test. If you use the material balance alternative, you would be required to measure the amount of all materials used in the coating operations served by the solvent recovery system during each month of the initial compliance period and determine the volatile matter contained in these materials. You would also measure the amount of volatile matter recovered by the solvent recovery system each month of the initial compliance period. Then you would compare the amount recovered for the 12-month initial compliance period to the amount used to determine the overall control efficiency, and apply this efficiency to the ratio of organic HAP to coating solids for the materials used. You would record the calculations and results and include them in your Notification of Compliance Status.

*Operating Limits.* As mentioned above, you would establish operating limits as part of the initial performance test of a capture system and control device, other than a solvent recovery system for which you conduct liquid-liquid material balances. The operating limits are the minimum or maximum (as applicable) values achieved for capture systems and control devices during the most recent performance test that demonstrated compliance with the emission limits.

The proposed rule specifies the parameters to monitor for the types of emission control systems commonly used in the industry. You would be required to install, calibrate, maintain, and continuously operate all monitoring equipment according to the manufacturer's specifications and ensure that the continuous parameter monitoring systems (CPMS) meet the requirements in § 63.4768 of the proposed rule. If you use control devices other than those identified in the proposed rule, you would submit the operating parameters to be monitored to the Administrator for approval. The authority to approve the parameters to be monitored is retained by EPA and is not delegated to States.

If you use a thermal oxidizer, you would continuously monitor the appropriate temperature and record it at least every 15 minutes. The temperature monitor is placed in the firebox or in the duct immediately downstream of the firebox before any substantial heat exchange occurs. The operating limit would be the average temperature

measured during the performance test, and for each consecutive 3-hour period, the average temperature would have to be at or above this limit. If you use a catalytic oxidizer, you may choose from two methods to determine operating limits. In the first method, you would continuously monitor the temperature immediately before and after the catalyst bed and record it at least every 15 minutes. The operating limits would be the average temperature before the catalyst bed and the average temperature difference across the catalyst bed during the performance test, and for each 3-hour period, the average temperature and the average temperature difference would have to be at or above these limits. In the alternative method, you would continuously monitor the temperature immediately before the catalyst bed and record it at least every 15 minutes. The operating limit would be the average temperature just before the catalyst bed during the performance test, and for each 3-hour period, the average temperature would have to be at or above these limits. As part of the alternative method, you must also develop and implement an inspection and maintenance plan for your catalytic oxidizer.

If you use a carbon adsorber and do not conduct liquid-liquid material balances to demonstrate compliance, you would monitor the carbon bed temperature after each regeneration and the total amount of steam or nitrogen used to desorb the bed for each regeneration. The operating limits would be the carbon bed temperature (not to be exceeded) and the amount of steam or nitrogen used for desorption (to be met as a minimum).

If you use a condenser, you would monitor the outlet gas temperature to ensure that the air stream is being cooled to a low enough temperature. The operating limit would be the average condenser outlet gas temperature measured during the performance test, and for each consecutive 3-hour period, the average temperature would have to be at or below this limit.

If you use a concentrator, you would monitor the desorption concentrate stream gas temperature and the pressure drop of the dilute stream across the concentrator. The operating limits would be the desorption concentrate gas stream temperature (to be met as a minimum) and the dilute stream pressure drop (not to be exceeded).

For each capture system that is not a PTE, you would establish operating limits for gas volumetric flow rate or duct static pressure for each enclosure

or capture device. The operating limit would be the average volumetric flow rate or duct static pressure during the performance test, to be met as a minimum. For each capture system that is a PTE, the operating limit would require the average facial velocity of air through all natural draft openings to be at least 200 feet per minute or the pressure drop across the enclosure to be at least 0.007 inches water.

*Work Practices.* If you use the emission rate with add-on controls option, you would be required to develop and implement on an ongoing basis a work practice plan for minimizing organic HAP emissions from storage, mixing, material handling, and waste handling operations. You would have to make the plan available for inspection if the Administrator requests to see it. We believe work practice standards are appropriate to further reduce emissions. We request specific comments on the work practice standards required for this source category.

If your affected source has an existing documented plan that incorporates steps taken to minimize emissions from the aforementioned sources, then your existing plan may be used to satisfy the requirement for a work practice plan.

If you use a capture system and control device for compliance, you would be required to develop and operate according to a SSMP during periods of startup, shutdown, or malfunction of the capture system and control device.

#### *H. What Are the Continuous Compliance Provisions? Emission Limits.*

*Option 1: Compliance based on the compliant material option.* If you demonstrate compliance with the proposed emission limits based on the compliant material option, you would demonstrate continuous compliance if, for each 12-month compliance period, the organic HAP content of each coating used does not exceed the applicable emission limit and you use no thinner or coating material that contains organic HAP. You would follow the same procedures for determining compliance that you used for the initial compliance period.

*Option 2: Compliance based on the emission rate without add-on controls option.* If you demonstrate compliance with the proposed emission limits based on the emission rate without add-on controls option, you would demonstrate continuous compliance if, for each 12-month compliance period, the ratio of total mass of organic HAP to total volume of coating solids used is less

than or equal to the applicable emission limit. You would follow the same procedures for calculating the organic HAP to coating solids ratio that you used for the initial compliance period.

*Option 3: Compliance based on the emission rate with add-on controls option.* For each coating operation on which you use a capture system and control device other than a solvent recovery system for which you conduct a liquid-liquid material balance, the continuous parameter monitoring results for each month would affect your compliance determination. If the monitoring results indicate no deviations from the operating limits and there were no bypasses of the control device, you would assume the capture system and control device are achieving the same percent emission reduction efficiency as they did during the most recent performance test in which compliance was demonstrated. You would then apply this percent reduction to the total mass of organic HAP in materials used in controlled coating operations to determine the monthly mass of organic HAP emissions from those operations. If there were any deviations from the operating limits during the month or any bypasses of the control device, you would account for them in the calculation of the monthly emissions by assuming the capture system and control device were achieving zero emission reduction during the periods of deviation. Then, you would determine the organic HAP emission rate by dividing the total mass of organic HAP emissions by the total volume of coating solids used during the 12-month compliance period. Every month, you would calculate the emission rate for the previous 12-month period.

For each coating operation on which you use a solvent recovery system and conduct a liquid-liquid material balance each month, you would use the liquid-liquid material balance to determine control efficiency. To determine the overall control efficiency, you must measure the amount of all materials used during each month 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, calculate the overall control efficiency, and apply it to the total mass of organic HAP in the materials used to determine total organic HAP emissions. Then, you would determine the 12-month organic HAP emission rate in the same manner as described above.

*Operating Limits.* If you use an emission capture system and control device, the proposed rule would require



you to achieve, on a continuous basis, the operating limits you establish during the performance test. If the continuous monitoring shows that the capture system and control device is operating outside the range of values established during the performance test, you have deviated from the established operating limits.

If you operate a capture system and control device that allow emissions to bypass the control device, you would have to demonstrate that organic HAP emissions collected by the capture system are being routed to the control device by monitoring for potential bypass of the control device. You may choose from the following four monitoring procedures:

- Flow control position indicator to provide a record of whether the exhaust stream is directed to the control device;
- Car-seal or lock-and-key valve closures to secure the bypass line valve in the closed position when the control device is operating;
- Valve closure monitoring to ensure any bypass line valve or damper is closed when the control device is operating; or
- Automatic shutdown system to stop the coating operation when flow is diverted from the control device.

If the bypass monitoring procedures indicate that emissions are not routed to the control device, you have deviated from the emission limits.

*Work practices.* If you use the emission rate with add-on controls option, you would be required to implement, on an ongoing basis, the work practice plan you developed during the initial compliance period. If you did not develop a plan for reducing organic HAP emissions or you do not implement the plan, this would be a deviation from the work practice standard.

If your affected source has an existing documented plan that incorporates steps taken to minimize emissions from the aforementioned sources, then your existing plan may be used to satisfy the requirement for a work practice plan.

If you use a capture system and control device for compliance, you would be required to operate according to your SSMP during periods of startup, shutdown, or malfunction of the capture system and control device.

#### *I. What Are the Notification, Recordkeeping, and Reporting Requirements?*

You are required to comply with the applicable requirements in the NESHAP General Provisions, subpart A of 40 CFR part 63, as described in the proposed rule. The General Provisions

notification requirements include: initial notifications, notification of performance test if you are complying using a capture system and control device, notification of compliance status, and additional notifications required for affected sources with continuous monitoring systems. The General Provisions also require certain records and periodic reports.

*Initial Notifications.* If the proposed standards apply to you, you must send a notification to the EPA Regional Office in the region where your facility is located, and to your State agency, within 120 days after the date of initial startup for new or reconstructed sources, or 120 days after publication of the final rule, whichever is later. Existing affected sources must send the initial notification within 120 days after publication of the final rule. The report notifies us and your State agency that you have constructed a new facility, reconstructed an existing facility, or you have an existing facility that is subject to the proposed rule. Thus, it allows you and the permitting authority to plan for compliance activities. You will also need to send a notification of planned construction or reconstruction of a source that would be subject to the proposed rule and apply for approval to construct or reconstruct.

*Notification of Performance Test.* If you demonstrate compliance by using a capture system and control device for which you do not conduct a liquid-liquid material balance, you would conduct a performance test. The performance test would be required no later than 180 days after initial startup or 180 days after publication of the final rule, whichever is later for a new or reconstructed affected source and no later than the compliance date for an existing affected source (3 years after publication of the final rule). 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 for the NESHAP.

*Notification of Compliance Status.* You would send us a Notification of Compliance Status within 30 days after the end of the initial compliance period. Your compliance procedures would depend on which compliance option you choose. In the notification, you would certify whether the affected source has complied with the proposed standards, identify the option(s) you used to demonstrate initial compliance, and provide calculations supporting the compliance demonstration.

If you elect to comply by using a capture system and control device for which you conduct performance tests,

you must provide the results of the tests. Your notification would also include the measured range of each monitored parameter and the operating limits established during the performance test, and information showing whether the source has complied with its operating limits during the initial compliance period.

*Recordkeeping Requirements.* You would be required to keep records of reported information and all other information necessary to document compliance with the proposed rule for 5 years. As required under the General Provisions, records for the 2 most recent years must be kept on-site; the other 3 years may be kept off-site. Records pertaining to the design and operation of the control and monitoring equipment must be kept for the life of the equipment.

Depending on the compliance option that you choose, you may need to keep records of the organic HAP content, volatile matter content, coating solids content, and quantity of the coatings, thinners, and cleaning materials used during each compliance period.

If you demonstrate compliance by using a capture system and control device, you would also need to keep records of the following:

- All required measurements, calculations, and supporting documentation needed to demonstrate compliance with the standards;
- All results of performance tests and parameter monitoring;
- All information necessary to demonstrate conformance with the requirements for minimizing emissions from mixing, storage, and handling operations for coatings, thinners, and cleaning materials;
- All information necessary to demonstrate conformance with the affected source's SSMP when the plan procedures are followed;
- The occurrence and duration of each startup, shutdown, or malfunction of the emission capture system and control device;
- Actions taken during startup, shutdown, or malfunction that are different from the procedures specified in the affected source's SSMP; and
- Each period during which a CPMS is malfunctioning or inoperative (including out-of-control periods).

The proposed rule would require you to collect and keep records according to certain minimum data requirements for the CPMS. Failure to collect and keep the specified minimum data would be a deviation that is separate from any emission limits, operating limits, or work practice standards.

Deviations, as determined from these records, will need to be recorded and also reported. A deviation is any instance when any requirement or obligation established by the proposed rule, including but not limited to, the emission limits, operating limits, and work practice standards, is not met.

If you use a capture system and control device to reduce organic HAP emissions, you would have to make your SSMP available for inspection if the Administrator requests to see it. The plan will stay in your records for the life of the affected source or until the affected source is no longer subject to the proposed standards. If you revise the plan, you would need to keep the previous superceded versions on record for 5 years following the revision.

**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 report stating that the affected source has been in continuous compliance. If deviations occur, you would need to include them in the report as follows:

- Report each deviation from the emission limits.
- Report each deviation from the work practice standards if you use a emission capture system and control device.
- If you use a emission capture system and control device other than a solvent recovery system for which you conduct liquid-liquid material balances, report each deviation from an operating limit and each time a bypass line diverts emissions from the control device to the atmosphere.
- Report other specific information on the periods of time and details of deviations that occurred.

You would also have to include in each semiannual report an identification of the compliance option(s) you used and of time periods when you changed to another option.

**Other Reports.** You would be required to submit reports for periods of startup, shutdown, or malfunction of the capture system and control device. If the procedures you follow during any startup, shutdown, or malfunction are inconsistent with your plan, you would report those procedures with your semiannual reports in addition to immediate reports required by § 63.10(d)(5)(ii) of the NESHAP General Provisions.

### III. Rationale for Selecting the Proposed Standards

#### A. How Did We Select the Source Category and Subcategories?

The surface coating of wood building products is a source category that is on the list of source categories to be regulated because it contains major sources that emit or have the potential to emit at least 9.07 Mg (10 tons) of any one HAP or at least 22.7 Mg (25 tons) of any combination of HAP annually. The proposed rule would control HAP emissions from both new or reconstructed sources and existing major sources. Area sources are not being regulated under the proposed rule.

The surface coating of wood building products as described in the listing includes any facility engaged in the surface coating of wood building products, whether they manufacture the wood building product or not. We use wood building products lists contained in the SIC and NAICS code descriptions to describe the vast array of wood building products.

We intend the source category to include facilities for which the surface coating of wood building products is either their principal activity or is an integral part of a production process that is the principal activity. Most coating operations are located at plant sites such as these. However, some may be located at plant sites for which some other activity is principal. Collocated surface coating operations comparable to the types and sizes of the dedicated facilities, in terms of the coating operations and applicable emission control techniques, are included in the source category. The definition of the source category is intended to reflect this inclusion.

Due to the broad scope of the wood building products surface coating industry, the category definition likewise needs to be broad in order to include the varieties of operations and activities that might occur at these facilities. However, a broad description has the potential to unintentionally include coating operations that we would not consider part of the category. Therefore, we reviewed the available data and information to identify a descriptor common to all the sources in the database that would further help to describe the category. Based on our review, we believe that the quantity of coating usage is the most equitable description for purposes of defining the scope of the category. Other descriptions that could have been used but that we have chosen not to propose because they would be too difficult to

implement or they are not as equitable as coating usage include production rate, quantity of emissions, and solvent usage.

Facilities in the affected source category for which the data were available to us reported annual usage of coatings to be higher than 4,170 liters per year (1,100 gal per year). Therefore, the types of coatings and coating application methods that were evaluated in developing these proposed standards represent only those known to be used at facilities applying more than 4,170 liters (1,100 gal) of coatings per year.

To be consistent with the available data, we propose to define the source category to include any wood building products surface coating operation that is a major source of HAP emissions or that is located at or is part of a major source and uses at least 4,170 liters per year (1,100 gal per year) of coatings annually. This definition is intended to include all facilities dedicated to wood building product surface coating operations, and similar types and sizes of surface coating operations that are collocated at major sources for which the principal activity is something other than surface coating. The source category does not include research or laboratory facilities; janitorial, building, and facility construction or maintenance operations; or hobby shops that are operated for personal rather than for commercial purposes. The source category also does not include coating applications using handheld nonrefillable aerosol containers. We request specific comments on the source category definition.

**Subcategory Selection.** The statute gives us discretion to determine if and how to subcategorize. Once the floor has been determined for new or reconstructed and existing affected sources for a source category or subcategory, we must set MACT standards that are no less stringent than the MACT floor. Such standards must then be met by all sources within the source category or subcategory. A subcategory is a group of similar sources within a given source category. As part of the regulatory development process, we evaluate the similarities and differences between industry segments or groups of facilities comprising a source category. In establishing subcategories, we consider factors such as process operations (type of process, raw materials, chemistry/formulation data, associated equipment, and final products); emission characteristics (amount and type of HAP); control device applicability; and opportunities for pollution prevention. We may also

consider existing regulations or guidance from States and other regulatory agencies in determining subcategories.

After reviewing survey responses from the industry, facility site visit reports, and information received from stakeholder meetings, we found that the wood building products surface coating industry may be grouped into five subcategories with differing coating and performance requirements. The five subcategories are: (1) Doors and windows; (2) flooring; (3) interior wall paneling and tileboard; (4) other interior panels; and (5) exterior siding, doorskins, and miscellaneous.

We specifically invite comments on the selection of subcategories in the proposed rule. For example, we are interested in whether there may be significant differences in product quality or manufacture that could appropriately be addressed by additional subcategories. The EPA notes that cost-effectiveness estimates for some of the subcategories covered by the proposed rule suggest that achieving the MACT floor will be expensive in comparison to the volume of organic HAP controlled. The data suggest that there is a great deal of variation in emission rates even within many of the subcategories. The EPA is interested in data or information that can be used to better address subcategorization and on the costs of the proposed rule and any alternative approaches that commenters may suggest.

*Doors and Windows.* The doors and windows subcategory typically includes the priming and sometimes prefinishing of doors and/or windows, including associated door and window components such as moulding or trim. Moulding and trim are decorative or ornamental wood products that are assembled with doors and windows to create a fixture. Facilities typically produce both doors and windows and door and window components at the same site. This is primarily to achieve consistency in the appearance of the coatings applied and to aid in the assembly of the end product or complete fixture (e.g., door or window assembly).

Door and window manufacturing and assembly operations are not typically performed at the same site as doorskin manufacturing due to the different manufacturing operations and types of coatings used. Doors are manufactured by applying adhesive to a core and frame and then pressing a doorskin on either side of the core and frame. Doorskins are thin pieces of wood, such as veneer or fiberboard, which are typically only primed at the doorskin

manufacturing location prior to being sent to a location that manufactures a door.

The doors and windows segment of the industry is faced with two separate coating problems due to the exposure to both inside and outside environments, which require substantially different performance requirements. First, the primers and prefinishes that will be subject to exterior conditions must have weather resistant properties similar to those of exterior siding. Second, the coatings subject to interior conditions must have stain and scrub resistant properties similar to interior coatings that may or may not be pigmented, but must still resist ultraviolet (UV) (sunlight) damage.

Related to those performance requirements, doors and windows are the only products in the industry that require solvent-borne wood treatment/preservative coatings prior to finishing. More than half of the coatings (57 percent) reported by the facilities in the database are high-HAP content wood treatment/preservative coatings. These are low-solids solvent-borne coatings that must penetrate the wood to protect from moisture and decay. There are no known low- or no-HAP alternatives for these coatings, and the average organic HAP content was 2.34 kg HAP/liter solids (19.5 lb HAP/gal solids), based on a sample of door and window facilities.

The sharp angles, small areas, and openings associated with moulding and trim of doors and windows are more difficult to coat than the other relatively flat surfaces coated in the other subcategories of this industry. Door and window surface coating operations utilize either hang or flat lines and coat using spray systems due to non-flat surfaces that prevent the use of roll coating. Line speeds for doors and windows are also much slower than most "flat" products (e.g., 100 doors per day versus 70,000 doorskins per day). Dip tanks are sometimes used for the wood treatment/preservative coatings, which allows the product to soak in the coating.

Although some doors are marketed with only a factory-applied primer, most are coated with a prefinish system that must meet industry performance standards. The prefinish system used is either solvent-based aminoplast technology or conventional solvent-based coating technology. Conventional solvent-based coating systems are typically used for interior doors while solvent-based aminoplast technology is used primarily for exterior doors to impart weather resistance characteristics without compromising aesthetic requirements. The commercial

resin systems available for mixing with aminoplast coats are diluted with xylene and/or toluene. We believe that the performance requirements and various coating operations of this industry segment warrant creation of a subcategory.

*Flooring.* The flooring subcategory includes facilities involved in the finishing or lamination of a wood building product to be used as hardwood or wood laminate flooring. Hardwood flooring is cut and grooved and typically finished in 8-foot or 12-foot strips. Laminate flooring is becoming increasingly popular in the United States and is manufactured using adhesives (typically urea formaldehyde or melamine formaldehyde) that are applied to a paper backing to one side of a thin piece of particleboard and a decorative laminate.

Flooring is limited by the coating types used, including the predominant use of solvent-borne stains and UV sealers and topcoats. Based on a sample of flooring operations, UV sealers and topcoats accounted for approximately 65 percent of all coatings and zero organic HAP emissions. Stains made up the other 35 percent of coatings and averaged 2.82 kg HAP/liter solids (23.5 lb HAP/gal solids). No other industry segment has this unique finishing scenario. Solvent-based stains are prevalent in the industry, and some industry representatives state they are needed in order to obtain the clarity of the wood grain. Recent technology advancements over the past few years have moved to water-borne stains, which in the past have tended to cause "fuzziness" in the appearance of the wood grain. In addition to the hardwood flooring products, the use of adhesives in laminated flooring distinguishes this operation from the remainder of the industry. For these reasons, we believe that a separate subcategory is appropriate for flooring.

*Interior Wall Paneling and Tileboard.* The interior wall paneling and tileboard subcategory includes the application of a coating to a panel used only as a wall covering. Interior wall paneling is usually grooved, frequently embossed, and sometimes grain printed to resemble various wood species. The substrate can be hardboard, plywood, medium density fiberboard (MDF), or particleboard. Tileboard is a premium interior wall paneling product used in areas of the home such as kitchens and bathrooms. If tileboard is manufactured at a facility, then interior wall paneling is typically manufactured at the same facility. Tileboard, however, is not always manufactured at facilities that manufacture interior wall paneling.

Interior wall paneling and tileboard are the primary components of the interior panel product subgroup of wood building products. Product specifications are established by consensus standards for both interior wall paneling and tileboard. Interior wall paneling has more decorative coating requirements than other products and is typically manufactured at the same facilities as tileboard, although in much smaller quantities. Tileboard has even more stringent product performance requirements (i.e., adhesion and hardness standards, household stain, scrub and moisture resistance, while maintaining a relative smooth surface) compared to standard interior wall paneling.

Decorative appearance (embossed, grooved, or grain-printed) and performance of the intermediate and end products require multiple coating layers and coating steps far exceeding other subcategories. Production speeds of 30 to 35 boards per minute require that coalescent solvents be used that come out of the wet film without leaving cure blisters and without leaving residual solvent in the coating film or substrate. Residual solvents can cause product "blocking" (products sticking together) during storage. Tileboard coatings average 0.71 kg HAP/liter solids (5.9 lb HAP/gal solids), and interior wall paneling coatings average around 0.19 kg HAP/liter solids (1.6 lb HAP/gal solids). Both products utilize high-temperature aminoplast crosslinkable coatings that are used on substrates that can tolerate higher processing temperatures. These coatings have traditionally been tied to solvent-borne technology where the main resins are supplied in toluene, xylene, and butyl alcohols. The aforementioned coating elements of this industry segment support the creation of a separate subcategory.

*Other Interior Panels.* The other interior panels subcategory typically includes the application of a coating to interior panels that are sold for uses other than wall paneling, such as sheathing, insulation board, pegboard, and ceiling tiles. Panels in this category are normally not embossed, grooved, or grain-printed. Other interior panels are frequently cut to size after coating either by the coater or the purchaser. In addition to hardwood plywood and hardboard substrates, softboard, fiberboard, particleboard, and MDF are other substrates that are shipped to, or produced at, wood building products facilities and used to produce coated interior panels.

Some facilities produce interior panels that are used in final products

such as shelving, drawersides, cabinetry, store fixtures, display cases, and many other wood furniture components. These types of facilities that are major sources of organic HAP emissions will not be covered under the wood building products (surface coating) NESHAP because they are already covered under the wood furniture NESHAP (40 CFR part 63, subpart JJ).

Other interior panels make up the rest of the interior panels subcategory of wood building products. In this segment of the industry, product specifications are established between the buyer and seller and not by consensus standards. These products are used for interior applications other than wall paneling or tileboard and use fewer coating layers. Other interior panels typically are produced with a single color and have fewer coating steps, less stringent product performance requirements, and some UV applications that provide low organic HAP emission rates. Primers and basecoats comprise 32 percent of all the coatings used on these products and average 0.21 kg HAP/liter solids (1.8 lb HAP/gal solids); prefinishes (clearcoats, paints/inks, sealers, stains, and topcoats) make up 47 percent of the coating usage and average 0.20 kg HAP/liter solids (1.7 lb HAP/gal solids). These product differences support a separate subcategory.

*Exterior Siding, Doorskin, and Miscellaneous.* Exterior siding may be made of solid wood, hardboard, or waferboard. Siding made of solid wood and hardboard is typically primed at the manufacturing facility and finished in the field, although some finishing may be performed during manufacturing on a limited basis. Exterior trim (material made out of siding panels and used for edges and corners around the siding) is typically manufactured at the same facility and coated with the same coatings as siding.

Facilities that produce waferboard or oriented strandboard siding typically use a coated paper overlay with a water-borne primer. Since the coating paper overlay is often added prior to the press, which is considered to be part of the substrate manufacturing process, these facilities will not be covered under the wood building products (surface coating) NESHAP, but will be covered under the plywood and composite wood products NESHAP (40 CFR part 63, subpart DDDD).

Doorskins are thin pieces of wood, such as veneer or fiberboard, used on the outside surfaces or facings of a door. Doorskin manufacturing is almost always performed at a separate location from door manufacturing. Also, many

facilities manufacture and finish both exterior siding and doorskins at the same site.

There are several miscellaneous wood building products that are surface coated and for which there is little or no emissions or product performance information available. However, several of the miscellaneous wood building products are used on the exterior of buildings or structures, which would require similar protection as exterior siding. These miscellaneous wood building products include, but are not limited to, shutters, shingles, awnings, laminated veneer lumber, and millwork that is not associated with doors and windows or flooring.

This industry segment involves exterior products that must have coatings able to withstand extreme and long-term weather conditions. The predominant use of primers (82 percent of all coatings) relates to a compatibility issue for all subsequent coating layers and warranty provisions. These primers are low-HAP content coatings that average 0.01 kg HAP/liter solids (0.1 lb HAP/gal solids). The prefinishes, including basecoats, sealers, stains, and topcoats, have a higher average HAP content, 0.07 kg HAP/liter solids (0.6 lb HAP/gal solids), and comprise the remaining 18 percent of the coatings used by these facilities. The typical siding facility produces mainly primed siding, but has a small percentage of prefinished material as well. Also, many exterior siding facilities coat doorskins at the same location.

In summary, an important aspect in the determination of subcategories for wood building products surface coating operations relates to the differences in the performance requirements of the coatings used, which relates to the type and the amount of coatings required to meet the end-product specifications. The effectiveness of an applied coating system depends on the extent to which the adhesion of the coating to the substrate or other coating layers can take place, the chemical nature and physical properties of the coating material, and the severity of service environment. The durability and quality of coatings depend on cohesion and adhesion properties. The EPA believes that coatings and surface multiplicity differences, as outlined above, warrant establishing subcategories for the wood building products source category.

#### *B. How Did We Select the Regulated Pollutants?*

Available emission data collected during the development of the proposed NESHAP show that the primary organic HAP emitted from the surface coating of

wood building products include xylene, toluene, ethyl benzene, EGBE, and glycol ethers (not including EGBE). These compounds account for 84 percent of this source category's nationwide organic HAP emissions. However, many other organic HAP are used in wood building products coatings, thinners, and cleaning materials. Therefore, the proposed rule would regulate emissions of all organic HAP.

Although most of the coatings used in this source category do not contain inorganic HAP, some special purpose coatings used by this source category do contain inorganic HAP such as chromium, manganese, and antimony. Emissions of these materials to the atmosphere are minimal because the facilities in this source category employ either water curtains or dry filters that remove overspray particles from the spray booth exhaust. Therefore, at this time, it does not appear that emissions of inorganic HAP from this source category warrant Federal regulation.

#### *C. How Did We Select the Affected Source?*

In selecting the affected source(s) for emission standards, our primary goal is to ensure that MACT is applied to HAP-emitting operations or activities within the source category or subcategory being regulated. The affected source also serves to determine where new source MACT applies under a particular standard. Specifically, the General Provisions in subpart A of 40 CFR part 63 define the terms "construction" and "reconstruction" with reference to the term "affected source" (40 CFR 60.2) and provide that new source MACT applies when construction or reconstruction of an affected source occurs (40 CFR 60.5). The collection of equipment and activities evaluated in determining MACT (including the MACT floor) is used in defining the affected source.

When emission standards are based on a collection of emission sources, or total facility emissions relative to products with similar coating operations, we select an affected source based on that same collection of emission sources, or the total facility emissions relative to products with similar coating operations, as well. This approach for defining the affected source broadly is particularly appropriate for industries where affected source-wide emission standards provide the opportunity and incentive for owners and operators to utilize control strategies that are more cost effective than if separate standards were

established for each emission point within a facility.

The affected source for these proposed standards is broadly defined to include all operations associated with the surface coating of wood building products and the cleaning of coating operation equipment. In selecting the affected source, we considered, for each operation, the extent to which HAP materials are used and the amount of HAP that are emitted. The organic HAP emissions from surface coating operations at wood building products facilities originate from the surface coating application, drying/curing, thinning and/or mixing, and cleaning operations; storage, handling, and transfer of coatings, thinners, and cleaning materials; and waste materials related to the various coatings applied to the wood building products. Consequently, the magnitude of emissions depends heavily on the amount and HAP content of the coatings used, the application method used, the amount and HAP content of solvents used, the drying/curing operations used, and the efficiency of any capture systems and add-on control devices. These factors are determined by the purpose or function of the coating, the wood building products surface coating method, and specific requirements related to the end use of the wood building product.

A broad definition of the affected source was selected to provide maximum flexibility in complying with the proposed emission limits for organic HAP. In planning its total usage of organic HAP materials, each affected source can select among available coatings, thinners, and cleaning materials to comply with the proposed limits. Additional information on the wood building products surface coating operations selected for regulation, and other operations, are included in the docket for the proposed standards.

#### *D. How Did We Determine the Basis and Level of the Proposed Standards for New or Reconstructed and Existing Sources?*

After we identify the specific source categories or subcategories of sources to regulate under section 112 of the CAA, we must develop emission standards for each category and subcategory. Section 112(d)(3) establishes a minimum baseline or "floor" for standards. For new or reconstructed sources in a category or subcategory, the standards cannot be less stringent than the emission control achieved in practice by the best-controlled similar source for which we have emission information. The standards for existing sources can

be less stringent than standards for new or reconstructed sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources (or the best-performing five existing sources for categories or subcategories with fewer than 30 sources) for which we have emission information.

Within the wood building products industry, organic HAP emission control for cleaning and surface coating operations is accomplished primarily through the use of low- or no-HAP coatings, thinners, and cleaning materials. Add-on capture and control systems for organic HAP are rarely used by the industry. While low- or no-HAP materials have achieved broad use throughout the industry, each particular coating technology is not used at every facility. Rather, facilities use various combinations of low- or no-HAP coatings, thinners, and cleaning materials. Thus, we judged the most reasonable approach to establishing a MACT floor to be the evaluation of a facility's organic HAP emissions from all coating-related operations. To account for differences in production levels from one facility to another, we normalized the organic HAP emission rate by the volume of coating solids used. We believe coating solids usage is an appropriate indicator of overall production levels.

We used information obtained from industry survey responses to estimate the sourcewide organic HAP emission rate from each survey respondent. We calculated total organic HAP emissions by assuming that 100 percent of the volatile components in all coatings (including adhesives), thinners, and cleaning materials are emitted. Sources used for determining the MACT floor emission limits were identified as those facilities that listed "major source" or "synthetic minor source" as their title V status on their questionnaire response, and other facilities whose data indicated that they have the capacity to increase their organic HAP emissions to at least 9.1 Mg/yr (10 tpy), even though they did not identify themselves as major or synthetic minor sources.

The survey response information was used to determine the total volume of coating solids used by each source. We included decorative, protective, and functional coatings in this total.

Using the sourcewide organic HAP emissions and the total volume of coating solids used for each survey respondent, we calculated the normalized organic HAP emissions (emission rate) in units of kg organic HAP per liter of coating solids (lb

organic HAP per gal of coating solids) used. The facilities were then ranked from the lowest to the highest emission rate in each of the five subcategories.

For two of the five subcategories, the existing source MACT floor was based on the top 12 percent of the facilities because the subcategories were projected to have more than 30 sources. The existing source MACT floor for the other three subcategories was based on the top five facilities because the subcategories were projected to have fewer than 30 sources. The "average" emission rate for each subcategory was interpreted as the median emission rate. The median emission rate was selected rather than the mean or mode because it is associated with an actual emission rate being achieved by a real facility.

The best performing facilities in each subcategory in the database achieved the emission limits for new or reconstructed sources in Table 2 of this preamble. The MACT floor process for existing sources resulted in the emission limits identified in Table 3 of this preamble by subcategory. The survey data showed no appreciable differences between the floor facilities and the remaining facilities in each subcategory in terms of the substrates coated, the coating technologies used, or the applicability of control measures across the various operations. Therefore, we believe the floor levels of control are achievable by the sources in each subcategory.

After the floors have been determined for new or reconstructed and existing sources in a source category or subcategory, we must set emission standards that are technically achievable and no less stringent than the floors. Such standards must then be met by all sources within the source category or subcategory. We identify and consider any reasonable regulatory alternatives that are "beyond-the-floor," taking into account emission reductions, cost, non-air quality health and environmental impacts, and energy requirements. These alternatives may be different for new or reconstructed and existing sources because of different MACT floors, and separate standards may be established for new or reconstructed and existing sources.

We identified and considered control levels more stringent than the MACT floor level of control for organic HAP. The more stringent option was the use of capture systems and add-on control devices at every facility. The add-on control device chosen for the beyond-the-floor analysis was a regenerative thermal oxidizer (RTO). An RTO was chosen to achieve the highest reduction level possible.

In evaluating the beyond-the-floor option, we calculated the additional costs and emission reductions associated with the use of a capture system and RTO. Since most affected sources do not have any form of add-on control to reduce organic HAP emissions from surface coating operations, we believe that almost all of the facilities, including the few facilities with existing add-on control, would need to install a new capture system and an RTO to achieve the more stringent level of control.

We calculated the cost to reduce each ton of organic HAP emissions using the more stringent level of control. Requiring sources to meet the beyond-the-floor level results in an estimated emission reduction of 4,800 Mg/yr (5,300 tpy) at an estimated cost of \$133.5 million per year or \$27,900 per Mg HAP (\$25,300 per ton HAP) reduced.

Without having information on the benefits that would be achieved by reducing emissions beyond-the-floor, we determined that the additional emission reductions that could be achieved do not warrant the costs that each existing source could incur by using add-on controls. Therefore, we are not requiring beyond-the-floor levels of emission reductions at this time. After implementation of these standards, we will evaluate the health and environmental risks that may be posed as a result of exposure to emissions from the wood building products source category. At that time, we will determine whether the additional costs are warranted in light of the available risk information.

For new or reconstructed sources, the organic HAP emission limits are zero or near zero kg HAP/liter of solids (lb HAP/gal of solids). These limits will achieve 100 percent or nearly 100 percent organic HAP emission reductions. Therefore, there are no other control technologies that need to be considered as a beyond-the-floor option for controlling organic HAP from new or reconstructed sources.

For new or reconstructed sources, we based the proposed standards on the new source MACT floor. For existing sources, we based the proposed standards on the existing source MACT floor. As described earlier, we determined that the beyond-the-floor option was not technically or economically feasible for all existing sources.

The MACT levels of control for new or reconstructed and existing sources can be achieved in several different ways. Many sources would be able to use low- or no-HAP coatings, although

they may not be available to meet the needs of every source. If a source is also using thinners or cleaning materials that contain organic HAP, then it may be able to switch to low- or no-HAP thinners and cleaning materials, which are widely available, to reduce the sourcewide organic HAP emissions rate to the MACT level. Other available options are the use of UV coatings or capture systems and add-on control devices to reduce emissions.

We note here that our assumption, used in the development of the MACT floors, that 100 percent of the organic HAP in the materials used are emitted by the affected source would not apply when the source sends organic HAP waste materials to a facility for treatment or disposal. We made that assumption because the industry survey responses provided little information as to the amount of organic HAP recovered and recycled or treated and disposed. We, therefore, concluded that the practice may not be common within the wood building products surface coating industry. We recognize, however, that some wood building products facilities may conduct such activities and should be allowed to account for such activities in determining their emissions. Thus, the proposed rule allows you to reduce the organic HAP emissions by the amount of any organic HAP contained in waste treated or disposed at a hazardous waste treatment, storage, and disposal facility that is regulated under 40 CFR part 262, 264, 265, or 266.

#### *E. How Did We Select the Format of the Proposed Standards?*

We selected the format of the standards to be mass of organic HAP per volume of coating solids. The proposed format would allow wood building products surface coating operation owners and operators flexibility in choosing any combination of means (including coating reformulation, use of low- or no-HAP materials, solvent elimination, work practices, and add-on control devices) to comply with the applicable emission limit that is workable for their particular situations.

We selected volume of coating solids as a component of the proposed standards to normalize the rate of organic HAP emissions across all sizes and types of facilities. We also selected the volume of coating solids used because it is directly related to the surface area coated and, therefore, provides an equitable basis for all coatings, regardless of differences in coating densities. A format based on the mass or weight of coating solids (instead of volume) could result in inequitable standards for higher-density pigmented

coatings, such as basecoats or enamels, compared to coatings with lower densities per unit volume.

Other choices for the format of the standards that we considered, but chose not to propose, included a usage limit (mass per unit of production) and a percent reduction limit based on a capture system and add-on control device. As it is not our intent to limit a facility's production under the proposed standards, we are not proposing a usage limit. We also evaluated, but are not proposing, a percent reduction limit, as most wood building products facilities are not expected to use capture systems and add-on control devices for compliance.

In lieu of emission standards, section 112(h) of the CAA allows work practice standards or other requirements to be established when a pollutant cannot be emitted through a conveyance or capture system, or when measurement is not practicable because of technological and economic limitations. Many wood building products facilities use some type of work practice measure to reduce HAP emissions from mixing, cleaning, storage, and waste handling areas as part of their standard operating procedures. They use these measures to decrease solvent usage and minimize exposure to workers. However, we do not have data to quantify accurately the emission reductions achievable by the work practice measures. The level of emissions depends on the type of equipment and the work practices used at the facility and would be very site-specific. For example, emissions from solvent-laden rags used to clean spray booths would depend on the method used to isolate and store such rags. In addition to lacking adequate data and information to quantify an emissions level for such operations, it is not practicable to measure emissions from these operations since they often occur in large open areas not amenable to testing. Therefore, work practice standards are appropriate for such operations under section 112(h) of the CAA.

We request specific comments on work practice standards and their applicability to this source category.

Under the option where emissions are reduced by using low- or no-HAP materials, we assume that all the organic HAP in the materials entering the affected source are volatilized (emitted). Therefore, emissions from operations occurring within the affected source (e.g., mixing operations) are accounted for in the determination of total materials usage at the affected source. However, when you comply by using capture systems and add-on control

devices, emissions from mixing, storage, and waste handling operations are often not routed to the control devices and would not be practicable to measure for inclusion in a determination of compliance with emission limits. Therefore, the proposed rule would require development and implementation of an emission reduction work practice plan to assure that emissions are reduced from such operations.

#### *F. How Did We Select the Testing and Initial Compliance Requirements?*

The proposed standards would allow you to choose among several options to demonstrate compliance with the proposed standards for organic HAP.

*Option 1: Compliant material option.* You would be required to document the organic HAP content of all coatings and show that each is less than the applicable emission limit. You would also have to show that each thinner and cleaning material used contains no organic HAP. Method 311 is the method developed by EPA for determining the mass fraction of organic HAP in coatings and has been used in previous surface coating NESHAP. We have not identified any other methods that provide advantages over Method 311 for use in the proposed standards.

Method 24 is the method developed by EPA for determining the mass fraction of volatile matter for coatings and can be used if you choose to determine the nonaqueous volatile matter content as a surrogate for organic HAP. In other NESHAP, volatile organic compound emission control measures have been implemented in coating industries, with Method 24 as the compliance method. We have not identified any other methods that provide advantages over Method 24 for use in the proposed standards.

The proposed methods for determining volume fraction of coating solids are either ASTM Method D2697-86 (1998) or ASTM Method D6093-97. These are voluntary consensus standards (VCS) determined to be appropriate for the proposed rule; they represent the consensus of the coating industry and other experts involved in their development.

*Option 2: Emission rate without add-on controls option.* To demonstrate initial compliance using this option, you would calculate the organic HAP emission rate for one or more of your coating operation(s) in the affected source, based on the mass of organic HAP in all coatings, thinners, and cleaning materials and the volume of coating solids used during the initial compliance period. You would be

required to demonstrate that the organic HAP emission rate does not exceed the applicable emission limit using the methods discussed previously.

*Option 3: Emission rate with add-on controls option.* If you use a capture system and control device other than a solvent recovery device for which you conduct a liquid-liquid material balance, you would be required to conduct an initial performance test of the system to determine its overall control efficiency. For a solvent recovery system for which you conduct a liquid-liquid material balance, you would determine the quantity of volatile matter applied and the quantity recovered during the initial compliance period to determine its overall control efficiency. For both cases, the overall control efficiency would be combined with the monthly mass of organic HAP in the coatings, thinners, and cleaning materials used to calculate the monthly organic HAP emission rate in kg HAP/liter of coating solids (lb HAP/gal of coating solids). If you conduct a performance test, you would also determine parameter operating limits during the test. The test methods that the proposed standards would require for the performance test have been required in many standards of performance for industrial surface coating sources under 40 CFR part 60 and NESHAP under 40 CFR part 63. We have not identified any other methods that provide advantages over these methods.

#### *G. How Did We Select the Proposed Continuous Compliance Requirements?*

To demonstrate continuous compliance with the emission limits, you would need records of the quantity of coatings, thinners, and cleaning materials used and the data and calculations supporting your determination of their organic HAP content. If you conduct liquid-liquid material balances, you would need records of the quantity of volatile matter used and the quantity recovered by the solvent recovery system each month.

To ensure continuous compliance with the proposed organic HAP emission limits and operating limits, the proposed standards would require continuous parameter monitoring of capture systems and control devices and recordkeeping. We selected the following requirements based on reasonable cost, ease of execution, and usefulness of the resulting data to both the owners or operators and EPA for ensuring continuous compliance with the emission limits and operating limits.

We are proposing that certain parameters be continuously monitored

for the types of capture systems and control devices commonly used in the industry. These monitoring parameters have been used in other standards for similar industries. The values of these parameters that correspond to compliance with the proposed emission limits are established during the initial or most recent performance test that demonstrates compliance. These values are your operating limits for the capture system and control device.

You would be required to determine 3-hour average values for most monitored parameters for the affected source. We selected this averaging period to reflect operating conditions during the performance test to ensure the control system is continuously operating at the same or better control level as during a performance test demonstrating compliance with the emission limits.

#### *H. How Did We Select Notification, Recordkeeping, and Reporting Requirements?*

You would be required to comply with the applicable requirements in the NESHAP General Provisions, subpart A of 40 CFR part 63, as described in Table 4 of the proposed subpart QQQQ. We evaluated the General Provisions requirements and included those we determined to be the minimum notification, recordkeeping, and reporting necessary to ensure compliance with, and effective enforcement of, the proposed standards, modifying them as appropriate for the wood building products surface coating category.

#### **IV. Summary of Environmental, Energy, and Economic Impacts**

The proposed standards will affect an estimated 205 major source facilities that surface coat wood building products. The impacts are presented relative to a baseline reflecting the level of control prior to the standards. Due to consolidation throughout the industry, there is not expected to be any net growth within the wood building products surface coating industry during the next 5 years. Therefore, there are no projected impacts for new sources. For a facility that is already in compliance with the proposed standards, only monitoring, recordkeeping, and reporting cost impacts were estimated. For more information on how impacts were estimated, see the BID in the docket.

##### *A. What Are the Air Impacts?*

The proposed emission limits are expected to reduce nationwide organic HAP emissions from existing major

sources by 3,200 Mg/yr (3,500 tpy). This represents a reduction of 61 percent from the baseline organic HAP emissions of 5,100 Mg/yr (5,600 tpy).

##### *B. What Are the Cost Impacts?*

We have estimated the costs related to complying with the emission limitations and meeting the monitoring, recordkeeping, and reporting requirements. The costs to comply with the emission limitations include the increased cost of low- or no-HAP coating materials and, for sources that choose to use existing emission capture and control systems, performance testing costs. We have assumed for this analysis that all affected sources will use low- or no-HAP coatings, thinners, and cleaning materials, and that these materials can be utilized without the need for capital expenditure. Annual costs to meet the monitoring, recordkeeping, and reporting requirements of the proposed rule have also been included.

To comply with the proposed standards, existing sources will likely use low- or no-HAP coatings, thinners, and cleaning materials. Compliance costs were estimated based on an incremental cost difference between the materials currently used and the complying materials. For purposes of the proposed rule, low- or no-HAP coatings used to comply with the standard are expected to be more expensive than the higher-HAP content coatings that are currently being used.

Performance testing costs for the facilities that choose to use existing control devices to comply with the standard include the labor hours required to conduct performance testing and monitoring on each emission capture system and control device used, and to develop the associated data elements for recordkeeping and reporting purposes.

Recordkeeping and reporting includes all labor hours related to the tracking of coating usage, the cost of purchasing computer equipment, the labor hours required to write and submit reports, and the labor hours required to train the coating personnel.

The total annual costs for the approximate 205 existing major sources are estimated at \$27.3 million. According to estimates, recordkeeping and reporting costs will contribute \$5.5 million to the overall cost of these proposed NESHAP; material costs will contribute \$21.6 million; and performance testing and monitoring will contribute \$246,000. We specifically invite comments on how the EPA might reduce the overall cost and cost by subcategory for the proposed rule and

thereby increase the rule's cost-effectiveness.

##### *C. What Are the Economic Impacts?*

We performed an EIA to provide an estimate of the facility and market impacts of the proposed standards as well as the social costs. In general, we expect the economic impacts of the proposed standards to be minimal, with price increases for affected wood building products surface coating facilities of only 0.04 percent.

For affected sources, the median profit margin will remain unchanged, with small entities being slightly more affected by the proposed standards. The median profit margin for small entities is expected to decrease from 2.8 percent to 2.7 percent while the median profit margin for large entities is expected to decrease from 3.3 percent to 3.2 percent. Therefore, we do not expect an adverse economic impact on the industry as a whole.

The distribution of costs across wood building products surface coating facilities is slanted toward the lower impact levels with many facilities incurring costs related only to annually recurring monitoring, recordkeeping, and reporting, and for only a few sources that choose to use their existing add-on controls, initial performance testing, and parameter monitoring. The EIA indicates that these regulatory costs are expected to represent only 0.2 percent of the value of coating services, which should not cause producers to cease or alter their current operations. Hence, no firms or facilities are at risk of closure because of the proposed standards. For more information, refer to the "Industry Profile: Wood Building Products Industry" (docket A-97-52).

##### *D. What Are the Non-Air Health, Environmental, and Energy Impacts?*

Based on information from the industry survey responses, we found no indication that the use of low- or no-organic-HAP content coatings, thinners, and cleaning materials at existing sources would result in any increase or decrease in non-air health, environmental, and energy impacts. There would be no change in utility requirements associated with the use of these materials, so there would be no change in the amount of energy consumed as a result of the material conversion. Also, there would be no significant change in the amount of materials used or the amount of waste produced.



## V. 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.

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

### B. 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” is 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.”

Under Section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and

local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. The EPA also may not issue a regulation that has federalism implications and that preempts State law, unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

The proposed 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. Pursuant to the terms of Executive Order 13132, it has been determined that the proposed rule does not have “federalism implications” because it does not meet the necessary criteria. Thus, the requirements of Section 6 of the Executive Order do not apply to the proposed rule. Although Section 6 of Executive Order 13132 does not apply to the proposed rule, EPA did consult with State and local officials to enable them to provide timely input in the development of the proposed rule.

### C. 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 6, 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.” “Policies that have tribal implications” is defined in the Executive Order to include regulations that have “substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes.”

The proposed rule does not have tribal implications. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. No tribal governments own or operate wood building products surface coating facilities. Thus, Executive Order 13175 does not apply to the proposed rule.

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

Executive Order 13045, “Protection of Children from Environmental Health Risks and Safety Risks” (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. The proposed rule is not subject to Executive Order 13045 because it does not establish environmental standards based on an assessment of health or safety risks. No children’s risk analysis was performed because no alternative technologies exist that would provide greater stringency at a reasonable cost. Furthermore, the proposed rule has been determined not to be “economically significant” as defined under Executive Order 12866.

### E. Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use

The proposed rule is not a “significant energy action” as defined in Executive Order 13211, “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use” (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, we have concluded that the proposed rule is not likely to have any adverse energy effects. Affected sources are expected to comply with the proposed rule through pollution prevention rather than end-of-pipe controls, and therefore, there would be no increase in energy usage.

### 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 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 proposed rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or to the private sector in any 1 year. The maximum total annual cost of the proposed rule has been estimated to be less than \$27.3 million. Thus, today's proposed rule is not subject to the requirements of sections 202 and 205 of the UMRA. In addition, EPA has determined that this proposed rule 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 proposed 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 RFA generally requires us to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For the purposes of assessing the impacts of today's proposed rule on small entities, small entity is defined as: (1) A small business whose parent company has no more than 500 employees; (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 that is independently owned and operated and is not dominant in its field.

In accordance with the RFA and SBREFA, EPA conducted an assessment of the proposed standards on small businesses within the wood building products surface coating industry. Based on Small Business Administration size definitions and reported sales and employment data, EPA's survey identified 4 out of 44 known facilities (4 out of 19 known companies) as being owned by small businesses that will be affected by the proposed standards. Small businesses own 9 percent of the facilities and represent 21 percent of the companies within the source category that will be affected by the proposed standards and are expected to incur less than 10 percent of the total industry compliance costs of \$27 million. There are no small firms with compliance costs equal to or greater than 1 percent of their sales. The EPA believes the sample of firms included in this small entity analysis is representative of the small firms that may be affected by the proposed rule.

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 the proposed standards (0.18 and 0.02 percent of sales for small and large firms, respectively). After reviewing the

range of costs to be borne by small businesses, EPA has determined the costs are typically small and, thus, certifies that this action will not have a significant economic impact on a substantial number of small entities. In addition, EPA has determined that the certification that this action will not have a significant economic impact on a substantial number of small entities does not change if this analysis is done using the NAICS-based small business size standards and NAICS industry data. For more information, please consult the memorandum "Small Entity Impact Analysis Results Comparison for Proposed Wood Building Products NESHAP" (docket A-97-52).

Although the proposed rule will not have a significant economic impact on a substantial number of small entities, EPA has nonetheless worked aggressively to minimize the impact of the proposed rule on small entities, consistent with our obligations under the CAA. Along with soliciting input from small entities during the data-gathering phase of the proposed rulemaking, three separate small business outreach activities were conducted. First, the Western States Air Resources Council was contacted about small business participation in a meeting held on October 12, 1999. (For more information, see docket A-57-92.) The second activity was a random screening of approximately 250 affected companies within the wood building products surface coating industry. Internet searches led to a list of ten possible small entities. These small entities were then invited to join a small business panel to assist in the development of the wood building products (surface coating) NESHAP. The third outreach program was conducted through SCOPE, which is a cooperative agreement between the EPA and the National Association of Schools of Public Affairs and Administration. Meetings are facilitated by local public affairs and administration faculty and are used to inform small entities of pending regulations. The informal meetings allow potentially affected facilities to voice concerns which will then be communicated to the EPA prior to the rulemaking. According to outreach in Georgia, Oregon, North Carolina, and Pennsylvania, small entities are aware of low- or no-HAP coatings that have the potential to reduce HAP emissions. Many of the small entities currently use low- or no-HAP coatings and agree that they are often less expensive than higher-HAP options, do not affect the quality of the final product, and the choices are

becoming more widespread. Therefore, small entities will not be adversely affected by the use of low- or no-HAP coatings. (For more information, see docket A-97-52.)

Another aspect of the small business outreach was the participation in meetings that focus on impacts on small entities. The EPA representatives for the wood building products (surface coating) NESHAP have attended conferences and trade association meetings that have included small entities. By attending conferences sponsored by the Center for Advanced Wood Processing, the Laminating Materials Association, and RadTech International North America, and being involved in coatings-related industry and trade association meetings, information about the proposed wood building product (surface coating) NESHAP has been shared with other communities concerned with impacts on small entities.

We believe these actions will significantly reduce the compliance burden for small entities, thereby mitigating potential impacts and preventing any duplication of effort. In addition, we are proposing compliance options which give small entities flexibility in choosing the most cost effective and least burdensome alternative for their operation. For example, a facility could purchase and use low- or no-HAP coatings, thinners, and cleaning materials (i.e., pollution prevention) that meet the proposed standards rather than being required to purchase add-on control systems. The low- or no-HAP option can be demonstrated with minimum burden by using already-maintained purchase and usage records. No testing of materials would be required, as the facility owners could show that their coatings meet the emission limits by providing formulation data supplied by the manufacturer.

We are also proposing one option that allows compliance demonstrations to be conducted on a rolling 12-month basis, meaning that the facility would each month calculate a 12-month organic HAP emission rate for the previous 12 months to determine compliance. This will give affected small entities extra flexibility in complying with the emission limits since small entities are more likely to use lower monthly volumes and/or a limited number of materials. Furthermore, we are proposing the minimum monitoring, recordkeeping, and reporting requirements needed for enforcement and compliance assurance.

We continue to be interested in the potential impacts of the proposed

standards on small entities and welcome comments on issues related to such impacts. For more information consult docket A-97-52.

#### *H. Paperwork Reduction Act*

The information collection requirements in the proposed rule will be 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. 2034.01) and a copy may be obtained from Susan Auby by mail at U.S. EPA, Office of Environmental Information, Collection Strategies Division (2822T), 1200 Pennsylvania Avenue, NW, Washington, DC 20460, by email at auby.susan@epa.gov, or by calling (202) 566-1672. A copy may also be downloaded off the internet at <http://www.epa.gov/icr>. The information requirements are not effective until OMB approves them.

The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to national emission standards. These recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to the 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 proposed standards would require maintaining records of all coatings, thinners, and cleaning materials data and calculations used to determine compliance. This information includes the volume used during each compliance period, mass fraction of organic HAP, density, and, for coatings only, volume fraction of coating solids.

If an add-on control device is used, records will need to be kept of the capture efficiency of the capture device, destruction or removal efficiency of the control device, and the monitored operating parameters. In addition, records will need to be kept of each calculation of the affected sourcewide emissions for each compliance period and all data, calculations, test results, and other supporting information.

The monitoring, recordkeeping, and reporting burden for this collection (averaged over the first 3 years after the effective date of the final rule) is estimated to be approximately 2,100 labor hours per year at a total annual cost of \$119,500. For facilities assumed

to use add-on control devices, this estimate includes a one-time performance test and report (with repeat tests where needed) and a one-time submission of a SSMP with semiannual reports for any event when the procedures in the plan were not followed. For all facilities, this estimate includes semiannual compliance status reports and recordkeeping. The total capital/startup costs associated with the monitoring requirements is \$58,000. We request specific comments on the labor hours and costs associated with the monitoring, recordkeeping, and reporting burden associated with this source category.

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 rules are listed in 40 CFR part 9 and 48 CFR chapter 15. Under the Paperwork Reduction Act, EPA must consider the paperwork burden imposed by any ICR in a proposed or final rule. The proposed standards will not impose any new information collection requirements beyond those specified in the ICR document.

Comments are requested on the EPA's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques. By U.S. Postal Service, send comments on the ICR to the Director, Collection Strategies Division, U.S. EPA (2822T), 1200 Pennsylvania Ave., NW, Washington, DC 20460; or by courier, send comments on the ICR to the Director, Collection Strategies Division, U.S. EPA (2822T), 1301 Constitution Avenue, NW, Room 6143, Washington, DC 20460 (Call (202) 566-1700); and to the Office of Information and Regulatory

Affairs, Office of Management and Budget, 725 17th St., NW, Washington, DC 20503, marked "Attention: Desk Officer for EPA." Include the ICR number in any correspondence. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after June 21, 2002, a comment to OMB is best assured of having its full effect if OMB receives it by July 22, 2002. The final rule will respond to any OMB or public comments on the information collection requirements contained in the proposal.

### *I. National Technology Transfer and Advancement Act*

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA) (Public Law 104-113; 15 U.S.C. 272 note) directs us to use VCS in regulatory and procurement activities unless to do so would be inconsistent with applicable law or otherwise impractical. The VCS are technical standards (e.g., material specifications, test methods, sampling and analytical procedures, and business practices) that are developed or adopted by one or more voluntary consensus bodies. The NTTAA directs EPA to provide Congress, through annual reports to OMB, with explanations when EPA does not use available and applicable VCS.

The proposed rule involves technical standards. We propose in this rule to use EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 3, 3A, 3B, 4, 24, 25, 25A, 204, 204A-F, and 311. Consistent with the NTTAA, we conducted searches to identify VCS in addition to these EPA methods. No applicable VCS were identified for EPA Methods 1A, 2A, 2D, 2F, 2G, 204, and 204A-F. The search and review results have been documented and are available in the docket (A-97-52) of the proposed rule.

Two VCS were identified for determining the volume solids content of coatings, and we propose to use them in the rule. The standards are ASTM D2697-86 (1998), "Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings," and ASTM D6093-97, "Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer." These standards fill a void in EPA Method 24 which directs that volume solids content be calculated from the coating manufacturer's formulation. The proposed rule does allow for the use of the volume solids content values calculated from the coating manufacturer's formulation; however, test results will take precedence if they do not agree with calculated values.

Six VCS: ASTM D1475-90, ASTM D2369-95, ASTM D3792-91, ASTM D4017-96a, ASTM D4457-85 (Reapproved 1991), and ASTM D5403-93, are already incorporated by reference (IBR) in EPA Method 24. In addition, we are separately specifying the use of ASTM D1475-90 for measuring the density of individual coating components, such as organic solvents.

Five VCS: ASTM D1979-91, ASTM D3432-89, ASTM D4747-87, ASTM D4827-93, and ASTM PS 9-94 are IBR in EPA Method 311.

In addition to the VCS we propose to use in this rule, the search for emissions measurement procedures identified 14 other VCS. We determined that 11 of these 14 standards identified for measuring emissions of the HAP or surrogate subject to emission standards in the proposed rule were impractical alternatives to EPA test methods for the purposes of the proposed rule. Therefore, the EPA does not intend to adopt these standards. (See docket A-97-52 for further information on the methods.)

The EPA takes comment on the compliance demonstration requirements in the proposed rule and specifically invites the public to identify potentially-applicable VCS. Commenters should also explain why the proposed rule should adopt these VCS in lieu of or in addition to EPA's standards. Emission test methods and performance specifications submitted for evaluation should be accompanied with a basis for the recommendation, including method validation data and the procedure used to validate the candidate method (if a method other than Method 301, 40 CFR part 63, appendix A, was used).

Sections 63.4730, 63.4741, 63.4761, 63.4765, 63.4766, and Table 3 to proposed subpart QQQQ lists the EPA testing methods included in the proposed rule. Under § 63.8 of subpart A of the General Provisions, a source may apply to EPA for permission to use alternative monitoring in place of any of the EPA testing methods.

### **List of Subjects in 40 CFR Part 63**

Environmental protection, Administrative practice and procedure, Air pollution control, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements, Surface coating, Wood building products.

Dated: May 23, 2002.

**Christine Todd Whitman,**  
*Administrator.*

For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is proposed to be 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 adding subpart QQQQ to read as follows:

### **Subpart QQQQ—National Emission Standards for Hazardous Air Pollutants: Surface Coating of Wood Building Products**

Sec.

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- Table 1 to Subpart QQQQ of Part 63. Emission Limits for New or Reconstructed Affected Sources
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- Table 5 to Subpart QQQQ of Part 63. Default Organic HAP Mass Fraction for Solvents and Solvent Blends
- Table 6 to Subpart QQQQ of Part 63. Default Organic HAP Mass Fraction for Petroleum Solvent Groups

**What This Subpart Covers****§ 63.4680 What is the purpose of this subpart?**

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

**§ 63.4681 Am I subject to this subpart?**

(a) Except as provided in paragraph (c) of this section, the source category to which this subpart applies is surface coating of wood building products, which means the application of coatings using, for example, roll coaters or curtain coaters in the finishing or laminating of any wood building

product that contains more than 50 percent by weight wood or wood fibers and is used in the construction, either interior or exterior, of a residential, commercial, or institutional building. The wood building products source category includes the subcategories listed in paragraphs (a)(1) through (5) of this section.

(1) *Doors and windows.* The doors and windows subcategory includes doors and windows and door and window components, such as millwork, moulding, or trim.

(2) *Flooring.* The flooring subcategory includes solid wood flooring, engineered wood flooring, and wood laminate flooring.

(3) *Interior wall paneling and tileboard.* The interior wall paneling and tileboard subcategory includes interior wall paneling products. Tileboard is a premium interior wall paneling product.

(4) *Other interior panels.* The other interior panel subcategory includes panels that are sold for uses other than interior wall paneling, such as sheathing, insulation board, pegboard, and ceiling tiles.

(5) *Exterior siding, doorskins, and miscellaneous.* The exterior siding, doorskins, and miscellaneous subcategory includes lap or panel siding, trimboard, doorskins, and other miscellaneous wood building products, including, but not limited to, shingles, awnings, shutters, and laminated veneer lumber.

(b) You are subject to this subpart if you own or operate a new, reconstructed, or existing affected source, as defined in § 63.4682, that uses 4,170 liters (1,100 gallons) per year, or more, of coatings in the source category defined in paragraph (a) of this section and that is a major source, is located at a major source, or is part of a major source of emissions of hazardous air pollutants (HAP). A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year or any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year.

(c) This subpart does not apply to surface coating and other operations that meet the criteria of paragraphs (c)(1) through (5) of this section.

(1) Surface coating in the processes identified in paragraphs (c)(1)(i) through (x) of this section that are part of plywood and composite wood product manufacturing subject to subpart DDDD of this part:

(i) Edge seals applied to a reconstituted wood product or plywood.

(ii) Anti-skid coatings applied to reconstituted wood products.

(iii) Primers applied to waferboard or oriented strand board (OSB) siding at the site of manufacture of the waferboard or OSB siding.

(iv) Painting of company logo information on plywood or reconstituted wood products.

(v) Application of trademarks and grade stamp to reconstituted wood products or plywood.

(vi) Application of nail lines to reconstituted wood products.

(vii) Synthetic patches, wood patches, and wood putty applied to plywood.

(viii) Application of concrete forming oil to wood building products.

(ix) Veneer composing.

(x) Application of shelving edge fillers to reconstituted wood products.

(2) Surface coating of wood furniture subject to subpart JJ of this part, including finishing, gluing, cleaning, and washoff operations associated with the production of wood furniture or wood furniture components. The surface coating of millwork and trim associated with cabinet manufacturing is also subject to subpart JJ of this part but not to this subpart.

(3) Surface coating that occurs during the manufacture of prefabricated homes and mobile/modular homes.

(4) Surface coating that occurs at research or laboratory facilities; janitorial, building, and facility construction or maintenance operations; or hobby shops that are operated for personal rather than for commercial purposes. The source category also does not include coating applications using handheld nonrefillable aerosol containers.

(5) Wood treatment or fire retardant operations located at wood building products facilities that involve impregnating the wood product with the wood treatment chemicals or fire retardant by using a retort or other pressure vessel.

**§ 63.4682 What parts of my plant does this subpart cover?**

(a) This subpart applies to each new, reconstructed, and existing affected source.

(b) The affected source is the collection of all of the items listed in paragraphs (b)(1) through (4) of this section that are used for surface coating of wood building products:

(1) All coating operations as defined in § 63.4781;

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

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

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

(c) An affected source is a new affected source if you commenced its construction after June 21, 2002, and the construction is of a completely new wood building products surface coating facility where previously no wood building products surface coating facility had existed.

(d) An affected source is reconstructed if you meet the criteria as defined in § 63.2.

(e) An affected source is existing if it is not new or reconstructed.

**§ 63.4683 When do I have to comply with this subpart?**

The date by which you must comply with this subpart is called the compliance date. The compliance date for each type of affected source is specified in paragraphs (a) through (c) of this section. The compliance date begins the initial compliance period during which you conduct the initial compliance demonstration described in §§ 63.4740, 63.4750, and 63.4760.

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

(1) If the initial startup of your new or reconstructed affected source is before [DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], the compliance date is [DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER].

(2) If the initial startup of your new or reconstructed affected source occurs after [DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], the compliance date is the date of initial startup of your affected source.

(b) For an existing affected source, the compliance date is the date 3 years after [DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER].

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

(1) For any portion of the source that becomes a new or reconstructed affected source subject to this subpart, the compliance date is the date of initial startup of the affected source or [DATE OF PUBLICATION OF FINAL RULE IN

THE FEDERAL REGISTER], whichever is later.

(2) For any portion of the source that becomes an existing affected source subject to this subpart, the compliance date is the date 1 year after the area source becomes a major source or 3 years after [DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], whichever is later.

(d) You must meet the notification requirements in § 63.4710 according to the dates specified in that section and in subpart A of this part. Some of the notifications must be submitted before the compliance dates described in paragraphs (a) through (c) of this section.

**Emission Limitations**

**§ 63.4690 What emission limits must I meet?**

(a) For a new or reconstructed affected source, you must limit organic HAP emissions to the atmosphere to no more than the applicable emission limit(s) in Table 1 to this subpart, determined according to the requirements in §§ 63.4741, 63.4751, or 63.4761.

(b) For an existing affected source, you must limit organic HAP emissions to the atmosphere to no more than the applicable emission limit(s) in Table 2 to this subpart, determined according to the requirements in § 63.4741, § 63.4751, or § 63.4761.

(c) If the affected source applies coatings to products that are in different subcategories as described in § 63.4681(a), then you must demonstrate initial and continuous compliance by conducting separate compliance demonstrations for each applicable subcategory emission limit and reflect these separate determinations in notifications, reports, and records required by §§ 63.4710, 63.4720, and 63.4730, respectively.

**§ 63.4691 What are my options for meeting the emission limits?**

You must include all coatings, thinners, and cleaning materials used in the affected source when determining whether the organic HAP emission rate is equal to or less than the applicable emission limit in § 63.4690. To make this determination, you must use at least one of the three compliance options listed in paragraphs (a) through (c) of this section. You may apply any of the compliance options to an individual coating operation or to multiple coating operations as a group or to the entire affected source. You may use different compliance options for different coating operations or at different times on the same coating operation. However, you may not use different compliance

options at the same time on the same coating operation. If you switch between compliance options for any coating operation or group of coating operations, you must document this switch as required by § 63.4730(c), and you must report it in the next semiannual compliance report required in § 63.4720.

(a) *Compliant material option.* Demonstrate that the organic HAP content of each coating used in the coating operation(s) is less than or equal to the applicable emission limit(s) in § 63.4690, and that each thinner and each cleaning material used contains no organic HAP. You must meet all the requirements of §§ 63.4740, 63.4741, and 63.4742 to demonstrate compliance with the emission limit using this option.

(b) *Emission rate without add-on controls option.* Demonstrate that, based on the coatings, thinners, and cleaning materials used in the coating operation(s), the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit(s) in § 63.4690, calculated as a rolling 12-month emission rate and determined on a monthly basis. You must meet all the requirements of §§ 63.4750, 63.4751, and 63.4752 to demonstrate compliance with the emission limit using this option.

(c) *Emission rate with add-on controls option.* Demonstrate that, based on the coatings, thinners, and cleaning materials used in the coating operation(s) and the emission reductions achieved by emission capture systems and add-on controls, the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit(s) in § 63.4690, calculated as a rolling 12-month emission rate and determined on a monthly basis. If you use this compliance option, you must also demonstrate that all emission capture systems and add-on control devices for the coating operation(s) meet the operating limits required in § 63.4692, except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4761(j), and that you meet the work practice standards required in § 63.4693. You must meet all the requirements of §§ 63.4760 through 63.4768 to demonstrate compliance with the emission limits, operating limits, and work practice standards using this option.

**§ 63.4692 What operating limits must I meet?**

(a) For any coating operation(s) on which you use the compliant material

option or the emission rate without add-on controls option, you are not required to meet any operating limits.

(b) For any controlled coating operation(s) on which you use the emission rate with add-on controls option, except those for which you use a solvent recovery system and conduct a liquid-liquid material balance according to § 63.4761(j), you must meet the operating limits specified in Table 3 to this subpart. These operating limits apply to the emission capture and control systems on the coating operation(s) for which you use this option, and you must establish the operating limits during the performance test according to the requirements in § 63.4767. You must meet the operating limits at all times after you establish them.

(c) If you use an add-on control device other than those listed in Table 3 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).

#### **§ 63.4693 What work practice standards must I meet?**

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

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

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

(2) Spills of organic-HAP coatings, thinners, cleaning materials, and waste materials must be minimized.

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

(4) Mixing vessels which contain organic-HAP coatings and other materials must be closed except when

adding to, removing, or mixing the contents.

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

(c) If your affected source has an existing documented plan that incorporates steps taken to minimize emissions from the sources specified in paragraphs (b)(1) through (5) of this section, then your existing plan can be used to meet the requirement for a work practice plan as specified in paragraph (b) of this section.

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

#### **General Compliance Requirements**

##### **§ 63.4700 What are my general requirements for complying with this subpart?**

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

(1) Any coating operation(s) for which you use the compliant material option or the emission rate without add-on controls option, as specified in § 63.4691(a) and (b), must be in compliance with the applicable emission limit in § 63.4690 at all times.

(2) Any coating operation(s) for which you use the emission rate with add-on controls option, as specified in § 63.4691(c), must be in compliance with the emission limitations as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) The coating operation(s) must be in compliance with the applicable emission limit in § 63.4690 at all times, except during periods of startup, shutdown, and malfunction.

(ii) The coating operation(s) must be in compliance with the operating limits for emission capture systems and add-on control devices required by § 63.4692 at all times, except during periods of startup, shutdown, and malfunction, and except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4761(j).

(iii) The coating operation(s) must be in compliance with the work practice standards in § 63.4693 at all times.

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

(c) If your affected source uses an emission capture system and add-on control device, you must maintain a log

detailing the operation and maintenance of the emission capture system, add-on control device, and continuous parameter monitors during the period between the compliance date specified for your affected source in § 63.4683 and the date when the initial emission capture system and add-on control device performance tests have been completed, as specified in § 63.4760. This requirement does not apply to a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.4761(j) in lieu of conducting performance tests.

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

##### **§ 63.4701 What parts of the General Provisions apply to me?**

Table 4 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

#### **Notifications, Reports, and Records**

##### **§ 63.4710 What notifications must I submit?**

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

(b) *Initial notification.* You must submit the Initial Notification required by § 63.9(b) for a new or reconstructed affected source no later than 120 days after initial startup or 120 days after [DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], whichever is later. For an existing affected source, you must submit the Initial Notification no later than 120 days after [DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER].

(c) *Notification of compliance status.* You must submit the Notification of Compliance Status required by § 63.9(h) no later than 30 calendar days following the end of the initial compliance period described in § 63.4740, § 63.4750, or § 63.4760 that applies to your affected

source. The Notification of Compliance Status must contain the information specified in paragraphs (c)(1) through (9) of this section and in § 63.9(h).

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of the report and beginning and ending dates of the reporting period. The reporting period is the initial compliance period described in § 63.4740, § 63.4750, or § 63.4760 that applies to your affected source.

(4) Identification of the compliance option or options specified in § 63.4691 that you used on each coating operation in the affected source during the initial compliance period.

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

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

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

(ii) If you failed to meet the applicable emission limit in § 63.4690, include all the calculations you used to determine the kilogram (kg) organic HAP emitted per liter of coating solids used (pounds (lb) organic HAP emitted per gallon of coating solids used). You do not need to submit information provided by the materials suppliers or manufacturers, or test reports.

(7) For each of the data items listed in paragraphs (c)(7)(i) through (iv) of this section that is required by the compliance option(s) you used to demonstrate compliance with the emission limit, include an example of how you determined the value, including calculations and supporting data. Supporting data can include a copy of the information provided by the supplier or manufacturer of the example coating or material or a summary of the results of testing conducted according to § 63.4741(a), (b), or (c). You do not need to submit copies of any test reports.

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

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

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

(iv) The amount of waste materials and the mass of organic HAP contained in the waste materials for which you are

claiming an allowance in Equation 1 of § 63.4751.

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

(i) For the compliant material option, provide an example calculation of the organic HAP content for one coating, using Equation 1 of § 63.4741.

(ii) For the emission rate without add-on controls option, provide the calculation of the total mass of organic HAP emissions for each month; the calculation of the total volume of coating solids used each month; and the calculation of the 12-month organic HAP emission rate, using Equations 1 and 1A through 1C, 2, and 3, respectively, of § 63.4751.

(iii) For the emission rate with add-on controls option, provide the calculation of the total mass of organic HAP emissions for the coatings, thinners, and cleaning materials used each month, using Equations 1 and 1A through 1C of § 63.4751; the calculation of the total volume of coating solids used each month, using Equation 2 of § 63.4751; the calculation of the mass of organic HAP emission reduction each month by emission capture systems and add-on control devices, using Equations 1 and 1A through 1D of § 63.4761, and Equations 2, 3, and 3A through 3C of § 63.4761, as applicable; the calculation of the total mass of organic HAP emissions each month, using Equation 4 of § 63.4761, as applicable; and the calculation of the 12-month organic HAP emission rate, using Equation 5 of § 63.4761.

(9) For the emission rate with add-on controls option, you must include the information specified in paragraphs (c)(9)(i) through (iv) of this section, except that the requirements in paragraphs (c)(9)(i) through (iii) of this section do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4761(j).

(i) For each emission capture system, a summary of the data and copies of the calculations supporting the determination that the emission capture system is a permanent total enclosure (PTE) or a measurement of the emission capture system efficiency. Include a description of the protocol followed for measuring capture efficiency, summaries of any capture efficiency tests conducted, and any calculations supporting the capture efficiency determination. If you use the data quality objective (DQO) or lower

confidence limit (LCL) approach, you must also include the statistical calculations to show you meet the DQO or LCL criteria in appendix A to subpart KK of this part. You do not need to submit complete test reports.

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

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

(iv) A statement of whether or not you developed and implemented the work practice plan required by § 63.4693.

#### § 63.4720 What reports must I submit?

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

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

(i) The first semiannual compliance report must cover the first semiannual reporting period which begins the day after the end of the initial compliance period described in § 63.4740, § 63.4750, or § 63.4760 that applies to your affected source and ends on June 30 or December 31, whichever occurs first following the end of the initial compliance period.

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

(iii) Each semiannual compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(iv) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR



70.6(a)(3)(iii)(A) or 40 CFR

71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the date specified in paragraph (a)(1)(iii) of this section.

(2) *Inclusion with title V report.* Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a semiannual compliance report pursuant to this section along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the semiannual compliance report includes all required information concerning deviations from any emission limitation in this subpart, its submission shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a semiannual compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.

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

(i) Company name and address.

(ii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

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

(iv) Identification of the compliance option or options specified in § 63.4691 that you used on each coating operation during the reporting period. If you switched between compliance options during the reporting period, you must report the beginning and ending dates you used each option.

(v) If you used the emission rate without add-on controls or the emission rate with add-on controls compliance option (§ 63.4691(b) or (c)), the calculation results for each rolling 12-

month organic HAP emission rate during the 6-month reporting period.

(4) *No deviations.* If there were no deviations from the emission limitations in §§ 63.4690, 63.4392, and 63.4393 that apply to you, the semiannual compliance report must include a statement that there were no deviations from the emission limitations during the reporting period. If you used the emission rate with add-on controls option and there were no periods during which the continuous parameter monitoring systems (CPMS) were out-of-control as specified in § 63.8(c)(7), the semiannual compliance report must include a statement that there were no periods during which the CPMS were out-of-control during the reporting period.

(5) *Deviations: compliant material option.* If you used the compliant material option, and there was a deviation from the applicable emission limit in § 63.4690, the semiannual compliance report must contain the information in paragraphs (a)(5)(i) through (iv) of this section.

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

(ii) The calculation of the organic HAP content (using Equation 1 of § 63.4741) for each coating identified in paragraph (a)(5)(i) of this section. You do not need to submit background data supporting this calculation (e.g., information provided by coating suppliers or manufacturers, or test reports).

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

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

(6) *Deviations: emission rate without add-on controls option.* If you used the emission rate without add-on controls option and there was a deviation from the applicable emission limit in § 63.4690, the semiannual compliance report must contain the information in paragraphs (a)(6)(i) through (iii) of this section.

(i) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in § 63.4690.

(ii) The calculations used to determine the 12-month organic HAP

emission rate for the compliance period in which the deviation occurred. You must provide the calculations for Equations 1, 1A through 1C, 2, and 3 in § 63.4751; and if applicable, the calculation used to determine mass of organic HAP in waste materials according to § 63.4751(e)(4). You do not need to submit background data supporting these calculations, (e.g., information provided by materials suppliers or manufacturers, or test reports).

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

(7) *Deviations: emission rate with add-on controls option.* If you used the emission rate with add-on controls option and there was a deviation from an emission limitation (including any periods when emissions bypassed the add-on control device and were diverted to the atmosphere), the semiannual compliance report must contain the information in paragraphs (a)(7)(i) through (xiv) of this section. This includes periods of startup, shutdown, and malfunction during which deviations occurred.

(i) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in § 63.4690.

(ii) The calculations used to determine the 12-month organic HAP emission rate for each compliance period in which a deviation occurred. You must provide the calculation of the total mass of organic HAP emissions for the coatings, thinners, and cleaning materials used each month, using Equations 1 and 1A through 1C of § 63.4751; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to § 63.4751(e)(4); the calculation of the total volume of coating solids used each month, using Equation 2 of § 63.4751; the calculation of the mass of organic HAP emission reduction each month by emission capture systems and add-on control devices, using Equations 1 and 1A through 1D of § 63.4761, and Equations 2, 3, and 3A through 3C of § 63.4761, as applicable; the calculation of the total mass of organic HAP emissions each month, using Equation 4 of § 63.4761; and the calculation of the 12-month organic HAP emission rate, using Equation 5 of § 63.4761. You do not need to submit the background data supporting these calculations (e.g., information provided by materials suppliers or manufacturers, or test reports).

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

(iv) A brief description of the CPMS.  
 (v) The date of the latest CPMS certification or audit.

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

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

(viii) The date and time period of each deviation from an operating limit in Table 3 to this subpart; date and time period of any bypass of the add-on control device; and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(ix) A summary of the total duration of each deviation from an operating limit in Table 3 to this subpart, each bypass of the add-on control device during the semiannual reporting period, and the total duration as a percent of the total source operating time during that semiannual reporting period.

(x) A breakdown of the total duration of the deviations from the operating limits in Table 3 to this subpart and bypasses of the add-on control device during the semiannual reporting period by identifying deviations due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

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

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

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

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

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

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

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

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

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

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

#### § 63.4730 What records must I keep?

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

(a) A copy of each notification and report that you submitted to comply with this subpart, and the documentation supporting each notification and report.

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

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

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

(2) For the compliant material option, a record of the calculation of the organic HAP content for each coating, using Equation 1 of § 63.4741.

(3) For the emission rate without add-on controls option, a record of the calculation of the total mass of organic HAP emissions for the coatings, thinners, and cleaning materials used each month, using Equations 1, 1A through 1C, and 2 of § 63.4751; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to § 63.4751(e)(4); the calculation of the total volume of coating solids used each month, using Equation 2 of § 63.4751; and the calculation of each 12-month organic HAP emission rate, using Equation 3 of § 63.4751.

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

(i) The calculation of the total mass of organic HAP emissions for the coatings, thinners, and cleaning materials used each month, using Equations 1 and 1A through 1C of § 63.4751; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to § 63.4751(e)(4).

(ii) The calculation of the total volume of coating solids used each month, using Equation 2 of § 63.4751.

(iii) The calculation of the mass of organic HAP emission reduction by emission capture systems and add-on control devices, using Equations 1 and 1A through 1D of § 63.4761, and Equations 2, 3, and 3A through 3C of § 63.4761, as applicable.

(iv) The calculation of the total mass of organic HAP emissions each month, using Equation 4 of § 63.4761.

(v) The calculation of each 12-month organic HAP emission rate, using Equation 5 of § 63.4761.

(d) A record of the name and volume of each coating, thinner, and cleaning material used during each compliance period.

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

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

(g) A record of the density for each coating used during each compliance period; and, if you use either the emission rate without add-on controls or the emission rate with add-on controls compliance option, the density for each thinner and cleaning material used during each compliance period.

(h) If you use an allowance in Equation 1 of § 63.4751 for organic HAP

contained in waste materials sent to or designated for shipment to a treatment, storage, and disposal facility (TSDF) according to § 63.4751(e)(4), you must keep records of the information specified in paragraphs (h)(1) through (3) of this section.

(1) The name and address of each TSDF to which you sent waste materials for which you use an allowance in Equation 1 of § 63.4751; a statement of which subparts under 40 CFR parts 262, 264, 265, and 266 apply to the facility; and the date of each shipment.

(2) Identification of the coating operations producing waste materials included in each shipment and the month or months in which you used the allowance for these materials in Equation 1 of § 63.4751.

(3) The methodology used in accordance with § 63.4751(e)(4) to determine the total amount of waste materials sent to or the amount collected, stored, and designated for transport to a TSDF each month; and the methodology to determine the mass of organic HAP contained in these waste materials. This must include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment.

(i) [Reserved]

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

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

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

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

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

(4) For each capture system that is a PTE, the data and documentation you used to support a determination that the capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and has a capture efficiency of 100 percent, as specified in § 63.4765(a).

(5) For each capture system that is not a PTE, the data and documentation you used to determine capture efficiency according to the requirements specified in §§ 63.4764 and 63.4765(b) through (e), including the records specified in paragraphs (k)(5)(i) through (iii) of this section that apply to you.

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

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

(iii) *Records for an alternative protocol.* Records needed to document a capture efficiency determination using an alternative method or protocol as specified in § 63.4765(e), if applicable.

(6) The records specified in paragraphs (k)(6)(i) and (ii) of this section for each add-on control device organic HAP destruction or removal efficiency determination as specified in § 63.4766.

(i) Records of each add-on control device performance test conducted according to §§ 63.4764 and 63.4766.

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

(7) Records of the data and calculations you used to establish the emission capture and add-on control

device operating limits as specified in § 63.4767 and to document compliance with the operating limits as specified in Table 3 to this subpart.

(8) A record of the work practice plan required by § 63.4693, and documentation that you are implementing the plan on a continuous basis.

**§ 63.4731 In what form and for how long must I keep my records?**

(a) Your records must be in a form suitable and readily available for expeditious review, according to § 63.10(b)(1). Where appropriate, the records may be maintained as electronic spreadsheets or as a database.

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You may keep the records off site for the remaining 3 years.

**Compliance Requirements for the Compliant Material Option**

**§ 63.4740 By what date must I conduct the initial compliance demonstration?**

You must complete the initial compliance demonstration for the initial compliance period according to the requirements in § 63.4741. The initial compliance period begins on the applicable compliance date specified in § 63.4683 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. The initial compliance demonstration includes the calculations according to § 63.4741 and supporting documentation showing that during the initial compliance period, you used no coating with an organic HAP content that exceeded the applicable emission limit in § 63.4690, and that you used no thinners or cleaning materials that contained organic HAP.

**§ 63.4741 How do I demonstrate initial compliance with the emission limitations?**

You may use the compliant material option for any individual coating operation, for any group of coating operations in the affected source, or for all the coating operations in the affected source. You must use either the emission rate without add-on controls option or the emission rate with add-on

controls option for any coating operation in the affected source for which you do not use this option. To demonstrate initial compliance using the compliant material option, the coating operation or group of coating operations must use no coating with an organic HAP content that exceeds the applicable emission limit in § 63.4690 and must use no thinner or cleaning material that contains organic HAP as determined according to this section. Any coating operation for which you use the compliant material option is not required to meet the operating limits or work practice standards required in §§ 63.4692 and 63.4693, respectively. To demonstrate initial compliance with the emission limitations using the compliant material option, you must meet all the requirements of this section for the coating operation or group of coating operations using this option. Use the procedures in this section on each coating, thinner, and cleaning material in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration. You do not need to redetermine the mass of organic HAP in coatings, thinners, or cleaning materials that have been reclaimed onsite and reused in the coating operation(s) for which you use the compliant material option, provided these materials in their condition as received were demonstrated to comply with the compliant material option.

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

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

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

(ii) Calculate the total mass fraction of organic HAP in the test material by

adding up the individual organic HAP mass fractions and truncating the result to three places after the decimal point (e.g., 0.763).

(2) *Method 24 (appendix A to 40 CFR part 60).* For coatings, you may use Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP.

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

(4) *Information from the supplier or manufacturer of the material.* You may rely on information other than that generated by the test methods specified in paragraphs (a)(1) through (3) of this section, such as manufacturer's formulation data, if it represents each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4), and at 1.0 percent by mass or more for other organic HAP compounds. For example, if toluene (not an OSHA carcinogen) is 0.5 percent of the material by mass, you do not have to count it. If there is a disagreement between such information and results of a test conducted according to paragraphs (a)(1) through (3) of this section, then the test method results will take precedence.

(5) *Solvent blends.* Solvent blends may be listed as single components for some materials in data provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP mass fraction of the materials. When test data and manufacturer's data for solvent blends are not available, you may use the default values for the mass fraction of organic HAP in these solvent blends listed in Table 5 or 6 to this subpart. If you use the tables, you must use the values in Table 5 for all solvent blends that match Table 5 entries, and you may only use Table 6 if the solvent blends in the materials you use do not match any of the solvent blends in Table 5 and you only know whether the blend is aliphatic or aromatic. However, if the results of a Method 311 test indicate higher values than those listed on Table 5 or 6 to this subpart, the Method 311 results will take precedence.

(b) *Determine the volume fraction of coating solids for each coating.* You must determine the volume fraction of coating solids (liters of coating solids per liter of coating) for each coating used during the compliance period by a

test or by information provided by the supplier or the manufacturer of the material, as specified in paragraphs (b)(1) and (2) of this section. If test results obtained according to paragraph (b)(1) of this section do not agree with the information obtained under paragraph (b)(2) of this section, the test results will take precedence.

(1) *ASTM Method D2697-86 (1998) or D6093-97.* You may use ASTM Method D2697-86 (1998) or D6093-97 to determine the volume fraction of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids.

(2) *Information from the supplier or manufacturer of the material.* You may obtain the volume fraction of coating solids for each coating from the supplier or manufacturer.

(c) *Determine the density of each coating.* Determine the density of each coating used during the compliance period from test results using ASTM Method D1475-98 or information from the supplier or manufacturer of the material. If there is disagreement between ASTM Method D1475-98 test results and the supplier's or manufacturer's information, the test results will take precedence.

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

$$H_C = \frac{(D_C)(W_C)}{V_S} \quad (\text{Eq. 1})$$

Where:

$H_C$  = organic HAP content of the coating, kg organic HAP per liter coating solids.

$D_C$  = density of coating, kg coating per liter coating, determined according to paragraph (c) of this section.

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

$V_S$  = volume fraction of coating solids, liter coating solids per liter coating, determined according to paragraph (b) of this section.

(e) *Compliance demonstration.* The organic HAP content for each coating used during the initial compliance period, determined using Equation 1 of this section, must be less than or equal to the applicable emission limit in § 63.4690; and each thinner and cleaning material used during the initial compliance period must contain no organic HAP, determined according to

paragraph (a) of this section. You must keep all records required by §§ 63.4730 and 63.4731. As part of the Notification of Compliance Status required in § 63.4710, you must identify the coating operation(s) for which you used the compliant material option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because you used no coatings for which the organic HAP content exceeded the applicable emission limit in § 63.4690, and you used no thinners or cleaning materials that contained organic HAP, determined according to paragraph (a) of this section.

**§ 63.4742 How do I demonstrate continuous compliance with the emission limitations?**

(a) For each compliance period to demonstrate continuous compliance, you must use no coating for which the organic HAP content determined using Equation 1 of § 63.4741, exceeds the applicable emission limit in § 63.4690; and use no thinner or cleaning material that contains organic HAP, determined according to § 63.4741(a). A compliance period consists of 12 months. Each month after the end of the initial compliance period described in § 63.4740 is the end of a compliance period consisting of that month and the preceding 11 months.

(b) If you choose to comply with the emission limitations by using the compliant material option, the use of any coating, thinner, or cleaning material that does not meet the criteria specified in paragraph (a) of this section is a deviation from the emission limitations that must be reported as specified in §§ 63.4710(c)(6) and 63.4720(a)(5).

(c) As part of each semiannual compliance report required by § 63.4720, you must identify the coating operation(s) for which you used the compliant material option. If there were no deviations from the emission limitations in § 63.4690, submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because you used no coating for which the organic HAP content exceeded the applicable emission limit in § 63.4690, and you used no thinner or cleaning material that contained organic HAP, determined according to § 63.4741(a).

(d) You must maintain records as specified in §§ 63.4730 and 63.4731.

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

**§ 63.4750 By what date must I conduct the initial compliance demonstration?**

You must complete the initial compliance demonstration for the initial compliance period according to the requirements of § 63.4751. The initial compliance period begins on the applicable compliance date specified in § 63.4683 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coating solids used each month and then calculate a 12-month organic HAP emission rate at the end of the initial 12-month compliance period. The initial compliance demonstration includes the calculations according to § 63.4751 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in § 63.4690.

**§ 63.4751 How do I demonstrate initial compliance with the emission limitations?**

You may use the emission rate without add-on controls option for any individual coating operation, for any group of coating operations in the affected source, or for all the coating operations in the affected source. You must use either the compliant material option or the emission rate with add-on controls option for any coating operation in the affected source for which you do not use this option. To demonstrate initial compliance using the emission rate without add-on controls option, the coating operation or group of coating operations must meet the applicable emission limit in § 63.4690. Any coating operation for which you use the emission rate without add-on controls option is not required to meet the operating limits or work practice standards required in §§ 63.4692 and 63.4693, respectively. You must meet all the requirements of this section to demonstrate initial compliance with the applicable emission limit in § 63.4690 for the coating operation(s). When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate with add-on controls option. You do not need to

redetermine the mass of organic HAP in coatings, thinners, or cleaning materials that have been reclaimed onsite and reused in the coating operation(s) for which you use the emission rate without add-on controls option.

(a) *Determine the mass fraction of organic HAP for each material.* Determine the mass fraction of organic HAP for each coating, thinner, and cleaning material used during each month according to the requirements in § 63.4741(a).

(b) *Determine the volume fraction of coating solids for each coating.* Determine the volume fraction of coating solids for each coating used during each month according to the requirements in § 63.4741(b).

(c) *Determine the density of each material.* Determine the density of each coating, thinner, and cleaning material used during each month from test results using ASTM Method D1475–98, information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475–98 test results and such other information sources, the test results will take precedence.

(d) *Determine the volume of each material used.* Determine the volume (liters) of each coating, thinner, and cleaning material used during each month by measurement or usage records.

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

$$H_e = A + B + C - R_w \quad (\text{Eq. 1})$$

Where:

- $H_e$  = total mass of organic HAP emissions during the month, kg.
- $A$  = total mass of organic HAP in the coatings used during the month, kg, as calculated in Equation 1A of this section.
- $B$  = total mass of organic HAP in the thinners used during the month, kg, as calculated in Equation 1B of this section.
- $C$  = total mass of organic HAP in the cleaning materials used during the month, kg, as calculated in Equation 1C of this section.
- $R_w$  = total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal

during the month, kg, determined according to paragraph (e)(4) of this section. (You may assign a value of zero to  $R_w$  if you do not wish to use this allowance.)

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

$$A = \sum_{i=1}^m (\text{Vol}_{c,i})(D_{c,i})(W_{c,i}) \quad (\text{Eq. 1A})$$

Where:

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

$\text{Vol}_{c,i}$  = total volume of coating,  $i$ , used during the month, liters.

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

$W_{c,i}$  = mass fraction of organic HAP in coating,  $i$ , kg organic HAP per kg coating.

$m$  = number of different coatings used during the month.

(2) Calculate the mass of organic HAP in the thinners used during the month, using Equation 1B of this section:

$$B = \sum_{j=1}^n (\text{Vol}_{t,j})(D_{t,j})(W_{t,j}) \quad (\text{Eq. 1B})$$

Where:

$B$  = total mass of organic HAP in the thinners used during the month, kg.

$\text{Vol}_{t,j}$  = total volume of thinner,  $j$ , used during the month, liters.

$D_{t,j}$  = density of thinner,  $j$ , kg per liter.

$W_{t,j}$  = mass fraction of organic HAP in thinner,  $j$ , kg organic HAP per kg thinner.

$n$  = number of different thinners used during the month.

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

$$C = \sum_{k=1}^p (\text{Vol}_{s,k})(D_{s,k})(W_{s,k}) \quad (\text{Eq. 1C})$$

Where:

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

$\text{Vol}_{s,k}$  = total volume of cleaning material,  $k$ , used during the month, liters.

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

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

$p$  = number of different cleaning materials used during the month.

(4) If you choose to account for the mass of organic HAP contained in waste materials sent or designated for

shipment to a hazardous waste TSDF in Equation 1 of this section, then you must determine it according to paragraphs (e)(4)(i) through (iv) of this section.

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

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

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

(iv) You may use any reasonable methodology to determine the amount of waste materials and the total mass of organic HAP they contain, and you must document your methodology as required in § 63.4730(h). To the extent that waste manifests include this information, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.

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

$$V_{st} = \sum_{i=1}^m (\text{Vol}_{c,i})(V_{s,i}) \quad (\text{Eq. 2})$$

Where:

$V_{st}$  = total volume of coating solids used during the month, liters.

$\text{Vol}_{c,i}$  = total volume of coating,  $i$ , used during the month, liters.

$V_{s,i}$  = volume fraction of coating solids for coating,  $i$ , liter solids per liter coating, determined according to § 63.4741(b).

$m$  = number of coatings used during the month.

(g) *Calculate the organic HAP emission rate.* Calculate the organic HAP emission rate for the 12-month compliance period, kg organic HAP per liter coating solids used, using Equation 3 of this section:

$$H_{yr} = \frac{\sum_{y=1}^{12} H_e}{\sum_{y=1}^{12} V_{st}} \quad (\text{Eq. 3})$$

Where:

$H_{yr}$  = organic HAP emission rate for the 12-month compliance period, kg organic HAP per liter coating solids.

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

$V_{st}$  = total volume of coating solids used during month,  $y$ , liters, as calculated by Equation 2 of this section.

$y$  = identifier for months.

(h) *Compliance demonstration.* The organic HAP emission rate for the initial 12-month compliance period, calculated using Equation 3 of this section, must be less than or equal to the applicable emission limit in § 63.4690. You must keep all records as required by §§ 63.4730 and 63.4731. As part of the Notification of Compliance Status required by § 63.4710, you must identify the coating operation(s) for which you used the emission rate without add-on controls option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in § 63.4690, determined according to this section.

#### § 63.4752 How do I demonstrate continuous compliance with the emission limitations?

(a) To demonstrate continuous compliance, the organic HAP emission rate for each compliance period, calculated using Equation 3 of § 63.4751, must be less than or equal to the applicable emission limit in § 63.4690. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in § 63.4750 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in § 63.4751(a) through (g) on a monthly basis using data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit in § 63.4690, this is a deviation from the emission limitations for that compliance period and must be reported as specified in §§ 63.4710(c)(6) and 63.4720(a)(6).

(c) As part of each semiannual compliance report required by § 63.4720, you must identify the coating operation(s) for which you used the emission rate without add-on controls option. If there were no deviations from the emission limitations, you must submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in § 63.4690, determined according to § 63.4751(a) through (g).

(d) You must maintain records as specified in §§ 63.4730 and 63.4731.

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

#### **§ 63.4760 By what date must I conduct performance tests and other initial compliance demonstrations?**

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

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in § 63.4683. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4761(j), you must conduct a performance test of each capture system and add-on control device according to §§ 63.4764, 63.4765, and 63.4766, and establish the operating limits required by § 63.4692 no later than 180 days after the applicable compliance date specified in § 63.4683. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.4761(j), you must initiate the first material balance no later than 180 days after the applicable compliance date specified in § 63.4683.

(2) You must develop and begin implementing the work practice plan required by § 63.4693 no later than the compliance date specified in § 63.4683.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of § 63.4761. The initial compliance period begins on the applicable compliance date specified in § 63.4683 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic

HAP emissions and volume of coating solids used each month and then calculate a 12-month organic HAP emission rate at the end of the initial 12-month compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.4764, 63.4765, and 63.4766; results of liquid-liquid material balances conducted according to § 63.4761(j); calculations according to § 63.4761 and supporting documentation showing that during the initial compliance period, the organic HAP emission rate was equal to or less than the emission limit in § 63.4690(a); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.4768; and documentation of whether you developed and implemented the work practice plan required by § 63.4693.

(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by § 63.4692 until after you have completed the performance tests specified in paragraph (a)(1) of this section. Instead, you must maintain a log detailing the operation and maintenance of the emission capture system, add-on control device, and continuous parameter monitors during the period between the compliance date and the performance test. You must begin complying with the operating limits for your affected source on the date you complete the performance tests specified in paragraph (a)(1) of this section. The requirements in this paragraph do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements in § 63.4761(j).

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

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in § 63.4683. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4761(j), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§ 63.4764, 63.4765, and 63.4766 and establish the operating limits required by § 63.4692 no later than the applicable compliance date specified in § 63.4683. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.4761(j), you must

initiate the first material balance no later than the compliance date specified in § 63.4683.

(2) You must develop and begin implementing the work practice plan required by § 63.4693 no later than the compliance date specified in § 63.4683.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of § 63.4761. The initial compliance period begins on the applicable compliance date specified in § 63.4683 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coating solids used each month and then calculate a 12-month organic HAP emission rate at the end of the initial 12-month compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.4764, 63.4765, and 63.4766; results of liquid-liquid material balances conducted according to § 63.4761(j); calculations according to § 63.4761 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the emission limit in § 63.4690(b); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.4768; and documentation of whether you developed and implemented the work practice plan required by § 63.4693.

#### **§ 63.4761 How do I demonstrate initial compliance?**

(a) You may use the emission rate with add-on controls option for any coating operation, for any group of coating operations in the affected source, or for all of the coating operations in the affected source. You may include both controlled and uncontrolled coating operations in a group for which you use this option. You must use either the compliant material option or the emission rate without add-on controls option for any coating operation in the affected source for which you do not use the emission rate with add-on controls option. To demonstrate initial compliance, the coating operation(s) for which you use the emission rate with add-on controls option must meet the applicable emission limitations in §§ 63.4690, 63.4692, and 63.4693. You must meet

all the requirements of this section to demonstrate initial compliance with the emission limitations. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate without add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners, or cleaning materials that have been reclaimed and reused in the coating operation(s) for which you use the emission rate with add-on controls option.

(b) *Compliance with operating limits.* Except as provided in § 63.4760(a)(4), and except for solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements of § 63.4761(j), you must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by § 63.4692, using the procedures specified in §§ 63.4767 and 63.4768.

(c) *Compliance with work practice requirements.* You must develop, implement, and document your implementation of the work practice plan required by § 63.4693 during the initial compliance period, as specified in § 63.4730.

(d) *Compliance with emission limits.* You must follow the procedures in paragraphs (e) through (n) of this section to demonstrate compliance with the applicable emission limit in § 63.4690.

(e) *Determine the mass fraction of organic HAP, density, volume used, and volume fraction of coating solids.* Follow the procedures specified in § 63.4751(a) through (d) to determine the mass fraction of organic HAP, density, and volume of each coating, thinner, and cleaning material used during each month; and the volume fraction of coating solids for each coating used during each month.

(f) *Calculate the total mass of organic HAP emissions before add-on controls.* Using Equation 1 of § 63.4751, calculate the total mass of organic HAP emissions before add-on controls from all coatings, thinners, and cleaning materials used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option.

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

liquid-liquid material balances. For each controlled coating operation using a solvent recovery system for which you conduct a liquid-liquid material balance, use the procedures in paragraph (j) of this section to calculate the organic HAP emission reduction.

(h) *Calculate the organic HAP emission reduction for each controlled coating operation not using liquid-liquid material balances.* For each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emission reduction, using Equation 1 of this section. The calculation applies the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coatings, thinners, and cleaning materials that are used in the coating operation served by the emission capture system and add-on control device during each month. For any period of time a deviation specified in § 63.4763(c) or (d) occurs in the controlled coating operation, including a deviation during a period of startup, shutdown, or malfunction, you must assume zero efficiency for the emission capture system and add-on control device. Equation 1 of this section treats the materials used during such a deviation as if they were used on an uncontrolled coating operation for the time period of the deviation.

$$H_c = (A_c + B_c + C_c - H_{unc}) \left( \frac{CE}{100} \times \frac{DRE}{100} \right) \quad (\text{Eq. 1})$$

Where:

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

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

$B_c$  = total mass of organic HAP in the thinners used in the controlled coating operation during the month, kg, as calculated in Equation 1B of this section.

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

$H_{unc}$  = total mass of organic HAP in the coatings, thinners, and cleaning materials used during all deviations specified in § 63.4763(c) and (d)

that occurred during the month in the controlled coating operation, kg, as calculated in Equation 1D of this section.

CE = capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in §§ 63.4764 and 63.4765 to measure and record capture efficiency.

DRE = organic HAP destruction or removal efficiency of the add-on control device, percent. Use the test methods and procedures in §§ 63.4764 and 63.4766 to measure and record the organic HAP destruction or removal efficiency.

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

$$A_c = \sum_{i=1}^m (\text{Vol}_{c,i}) (D_{c,i}) (W_{c,i}) \quad (\text{Eq. 1A})$$

Where:

$A_c$  = total mass of organic HAP in the coatings used in the controlled coating operation, kg.

$\text{Vol}_{c,i}$  = total volume of coating, i, used during the month, liters.

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

$W_{c,i}$  = mass fraction of organic HAP in coating, i, kg per kg.

$m$  = number of different coatings used.

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

$$B_c = \sum_{j=1}^n (\text{Vol}_{t,j}) (D_{t,j}) (W_{t,j}) \quad (\text{Eq. 1B})$$

Where:



$B_c$  = total mass of organic HAP in the thinners used in the controlled coating operation during the month, kg.

$Vol_{t,j}$  = total volume of thinner, j, used during the month, liters.

$D_{t,j}$  = density of thinner, j, kg per liter.

$W_{t,j}$  = mass fraction of organic HAP in thinner, j, kg per kg.

$n$  = number of different thinners used.

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

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

Where:

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

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

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

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

$p$  = number of different cleaning materials used.

(4) Calculate the mass of organic HAP in the coatings, thinners, and cleaning materials used in the controlled coating operation during deviations specified in § 63.4763(c) and (d), using Equation 1D of this section:

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

Where:

$H_{unc}$  = total mass of organic HAP in the coatings, thinners, and cleaning

materials used during all deviations specified in § 63.4763(c) and (d) that occurred during the month in the controlled coating operation, kg.

$Vol_h$  = total volume of coating, thinner, or cleaning material, h, used in the controlled coating operation during deviations, liters.

$D_h$  = density of coating, thinner, or cleaning material, h, kg per liter.

$W_h$  = mass fraction of organic HAP in coating, thinner, or cleaning material, h, kg organic HAP per kg coating.

$q$  = number of different coatings, thinners, or cleaning materials.

(i) [Reserved]

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

(1) For each solvent recovery system, install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile organic matter recovered by the solvent recovery system each month. The device

must be initially certified by the manufacturer to be accurate to within  $\pm 2.0$  percent of the mass of volatile organic matter recovered.

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

(3) Determine the mass fraction of volatile organic matter for each coating, thinner, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, kg volatile organic matter per kg coating. You may determine the volatile organic matter mass fraction using Method 24 of 40 CFR part 60, appendix A, or an EPA approved alternative method, or you may use information provided by the manufacturer or supplier of the coating. In the event of any inconsistency between information provided by the manufacturer or supplier and the results of Method 24 of 40 CFR part 60, appendix A, or an approved alternative method, the test method results will govern.

(4) Determine the density of each coating, thinner, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, kg per liter, according to § 63.4751(c).

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

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

$$R_v = 100 \times \frac{M_{vr}}{\sum_{i=1}^m (Vol_i)(D_i)(WV_{c,i}) + \sum_{j=1}^n (Vol_j)(D_j)(WV_{t,j}) + \sum_{k=1}^p (Vol_k)(D_k)(WV_{s,k})}$$

Where:

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

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

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

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

$WV_{c,i}$  = mass fraction of volatile organic matter for coating, i, kg volatile organic matter per kg coating.

$Vol_j$  = volume of thinner, j, used in the coating operation controlled by the solvent recovery system during the month, liters.

$D_j$  = density of thinner, j, kg per liter.

$WV_{t,j}$  = mass fraction of volatile organic matter for thinner, j, kg volatile organic matter per kg thinner.

$Vol_k$  = volume of cleaning material, k, used in the coating operation

controlled by the solvent recovery system during the month, liters.

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

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

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

$n$  = number of different thinners used in the coating operation controlled by

the solvent recovery system during the month.  
 $p$  = number of different cleaning materials used in the coating

operation controlled by the solvent recovery system during the month.  
 (7) Calculate the mass of organic HAP emission reduction for the coating

operation controlled by the solvent recovery system during the month, using Equation 3 of this section:

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

Where:

$H_{CSR}$  = mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system during the month, kg.

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

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

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

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

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

$$A_{CSR} = \sum_{i=1}^m (\text{Vol}_{c,i}) (D_{c,i}) (W_{c,i}) \quad (\text{Eq. 3A})$$

Where:

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

$\text{Vol}_{c,i}$  = total volume of coating,  $i$ , used during the month in the coating operation controlled by the solvent recovery system, liters.

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

$W_{c,i}$  = mass fraction of organic HAP in coating,  $i$ , kg per kg.

$m$  = number of different coatings used.

(2) Calculate the mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system, kg, using Equation 3B of this section:

$$B_{CSR} = \sum_{j=1}^n (\text{Vol}_{t,j}) (D_{t,j}) (W_{t,j}) \quad (\text{Eq. 3B})$$

Where:

$B_{CSR}$  = total mass of organic HAP in the thinners used in the coating

operation controlled by the solvent recovery system during the month, kg.

$\text{Vol}_{t,j}$  = total volume of thinner,  $j$ , used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{t,j}$  = density of thinner,  $j$ , kg per liter.

$W_{t,j}$  = mass fraction of organic HAP in thinner,  $j$ , kg per kg.

$n$  = number of different thinners used.

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

$$C_{CSR} = \sum_{k=1}^p (\text{Vol}_{s,k}) (D_{s,k}) (W_{s,k}) \quad (\text{Eq. 3C})$$

Where:

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

$\text{Vol}_{s,k}$  = total volume of cleaning material,  $k$ , used during the month in the coating operation controlled by the solvent recovery system, liters.

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

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

$p$  = number of different cleaning materials used.

(k) Calculate the total volume of coating solids used. Determine the total volume of coating solids used, liters, which is the combined volume of coating solids for all the coatings used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option, using Equation 2 of § 63.4751.

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

$$H_{HAP} = H_e - \sum_{i=1}^q (H_{c,i}) - \sum_{j=1}^r (H_{CSR,j}) \quad (\text{Eq. 4})$$

Where:

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

$H_e$  = total mass of organic HAP emissions before add-on controls from all the coatings, thinners, and

cleaning materials used during the month, kg, determined according to paragraph (f) of this section.

$H_{c,i}$  = total mass of organic HAP emission reduction for controlled coating operation,  $i$ , not using a liquid-liquid material balance,

during the month, kg, from Equation 1 of this section.

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

month, kg, from Equation 3 of this section.

q = number of controlled coating operations not using a liquid-liquid material balance.

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

(m) *Calculate the organic HAP emission rate for the 12-month compliance period.* Determine the organic HAP emission rate for the 12-month compliance period, kg organic HAP per liter coating solids used, using Equation 5 of this section:

$$H_{\text{annual}} = \frac{\sum_{y=1}^{12} H_{\text{HAP},y}}{\sum_{y=1}^{12} V_{\text{st},y}} \quad (\text{Eq. 5})$$

Where:

$H_{\text{annual}}$  = organic HAP emission rate for the 12-month compliance period, kg organic HAP per liter coating solids.

$H_{\text{HAP},y}$  = organic HAP emission rate for month, y, determined according to Equation 4 of this section.

$V_{\text{st},y}$  = total volume of coating solids, liters, used during month, y, from Equation 2 of § 63.4751.

y = identifier for months.

(n) *Compliance demonstration.* To demonstrate initial compliance with the emission limit, the organic HAP emission rate, calculated using Equation 5 of this section, must be less than or equal to the applicable emission limit in § 63.4690. You must keep all records as required by §§ 63.4730 and 63.4731. As part of the Notification of Compliance Status required by § 63.4710, you must identify the coating operation(s) for which you used the emission rate with add-on controls option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in § 63.4690, and you achieved the operating limits required by § 63.4692 and the work practice standards required by § 63.4693.

#### § 63.4762 [Reserved]

#### § 63.4763 How do I demonstrate continuous compliance with the emission limitations?

(a) To demonstrate continuous compliance with the applicable emission limit in § 63.4690, the organic HAP emission rate for each compliance period, calculated using Equation 5 of § 63.4761, must be equal to or less than

the applicable emission limit in § 63.4690. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in § 63.4760 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in § 63.4761 on a monthly basis using data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit in § 63.4690, this is a deviation from the emission limitation for that compliance period and must be reported as specified in §§ 63.4710(c)(6) and 63.4720(a)(7).

(c) You must demonstrate continuous compliance with each operating limit required by § 63.4692 that applies to you, as specified in Table 3 to this subpart.

(1) If an operating parameter is out of the allowed range specified in Table 3 to this subpart, this is a deviation from the operating limit that must be reported as specified in §§ 63.4710(c)(6) and 63.4720(a)(7).

(2) If an operating parameter deviates from the operating limit specified in Table 3 to this subpart, then you must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation. For the purposes of completing the compliance calculations specified in § 63.4761(h), you must treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation, as indicated in Equation 1 of § 63.4761.

(d) You must meet the requirements for bypass lines in § 63.4768(b) for controlled coating operations for which you do not conduct liquid-liquid material balances. If any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running, this is a deviation that must be reported as specified in §§ 63.4710(c)(6) and 63.4720(a)(7). For the purposes of completing the compliance calculations specified in § 63.4761(h), you must treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation, as indicated in Equation 1 of § 63.4761.

(e) You must demonstrate continuous compliance with the work practice standards in § 63.4693. If you did not develop a work practice plan, or you did not implement the plan, or you did not

keep the records required by § 63.4730(k)(8), this is a deviation from the work practice standards that must be reported as specified in §§ 63.4710(c)(6) and 63.4720(a)(7).

(f) As part of each semiannual compliance report required in § 63.4720, you must identify the coating operation(s) for which you used the emission rate with add-on controls option. If there were no deviations from the emission limitations, submit a statement that you were in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in § 63.4690, and you achieved the operating limits required by § 63.4692 and the work practice standards required by § 63.4693 during each compliance period.

(g) During periods of startup, shutdown, or malfunction of the emission capture system, add-on control device, or coating operation that may affect emission capture or control device efficiency, you must operate in accordance with the startup, shutdown, and malfunction plan required by § 63.4700(d).

(h) Consistent with §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction of the emission capture system, add-on control device, or coating operation that may affect emission capture or control device efficiency are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with the startup, shutdown, and malfunction plan. The Administrator will determine whether deviations that occur during a period you identify as a startup, shutdown, or malfunction are violations, according to the provisions in § 63.6(e).

(i) [Reserved]

(j) You must maintain records as specified in §§ 63.4730 and 63.4731.

#### § 63.4764 What are the general requirements for performance tests?

(a) You must conduct each performance test required by § 63.4760 according to the requirements in § 63.7(e)(1) and under the conditions in this section unless you obtain a waiver of the performance test according to the provisions in § 63.7(h).

(1) *Representative coating operation operating conditions.* You must conduct the performance test under representative operating conditions for the coating operation. Operations during periods of startup, shutdown, or malfunction, and during periods of nonoperation do not constitute

representative conditions. You must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation.

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

(b) You must conduct each performance test of an emission capture system according to the requirements in § 63.4765. You must conduct each performance test of an add-on control device according to the requirements in § 63.4766. § 63.4765 How do I determine the emission capture system efficiency?

You must use the procedures and test methods in this section to determine capture efficiency as part of the performance test required by § 63.4760.

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

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

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

(b) *Measuring capture efficiency.* If the capture system does not meet both of the criteria in paragraphs (a)(1) and (2) of this section, then you must use

one of the three protocols described in paragraphs (c), (d), and (e) of this section to measure capture efficiency. The capture efficiency measurements use TVH capture efficiency as a surrogate for organic HAP capture efficiency. For the protocols in paragraphs (c) and (d) of this section, the capture efficiency measurement must consist of three test runs. Each test run must be at least 3 hours in duration or the length of a production run, whichever is longer, up to 8 hours. For the purposes of this test, a production run means the time required for a single part to go from the beginning to the end of production, which includes surface preparation activities and drying or curing time.

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

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

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

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

$$\text{TVH}_{\text{used}} = \sum_{i=1}^n (\text{TVH}_i)(\text{Vol}_i)(D_i) \quad (\text{Eq. 1})$$

Where:

$\text{TVH}_{\text{used}}$  = mass of liquid TVH in materials used in the coating operation during the capture efficiency test run, kg.

$\text{TVH}_i$  = mass fraction of TVH in coating, thinner, or cleaning material,  $i$ , that is used in the coating operation during the capture efficiency test run, kg TVH per kg material.

$\text{Vol}_i$  = total volume of coating, thinner, or cleaning material,  $i$ , used in the coating operation during the capture efficiency test run, liters.

$D_i$  = density of coating, thinner, or cleaning material,  $i$ , kg material per liter material.

$n$  = number of different coatings, thinners, and cleaning materials used in the coating operation during the capture efficiency test run.

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

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

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

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

$$\text{CE} = \frac{(\text{TVH}_{\text{used}} - \text{TVH}_{\text{uncaptured}})}{\text{TVH}_{\text{used}}} \times 100 \quad (\text{Eq. 2})$$

Where:

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

TVH<sub>used</sub> = total mass of TVH liquid input used in the coating operation during the capture efficiency test run, kg.

TVH<sub>uncaptured</sub> = total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg, determined according to paragraph (c)(4) of this section.

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

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

(1) Either use a building enclosure or construct an enclosure around the coating operation where coatings, thinners, and cleaning materials are

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

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

(i) The sampling points for the Method 204B or 204C of appendix M to 40 CFR part 51 measurement must be upstream from the add-on control device and must represent total emissions routed from the capture system and entering the add-on control device.

(ii) If multiple emission streams from the capture system enter the add-on

control device without a single common duct, then the emissions entering the add-on control device must be simultaneously measured in each duct, and the total emissions entering the add-on control device must be determined.

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

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

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

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

$$CE = \frac{TVH_{\text{captured}}}{(TVH_{\text{captured}} + TVH_{\text{uncaptured}})} \times 100 \quad (\text{Eq. 3})$$

Where:

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

TVH<sub>captured</sub> = Total mass of TVH captured by the emission capture system as measured at the inlet to the add-on control device during the emission capture efficiency test run, kg, determined according to paragraph (d)(2) of this section.

TVH<sub>uncaptured</sub> = Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg, determined according to paragraph (d)(3) of this section.

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

(e) *Alternative capture efficiency protocol.* As an alternative to the procedures specified in paragraphs (c)

and (d) of this section, you may determine capture efficiency using any other capture efficiency protocol and test methods that satisfy the criteria of either the DQO or LCL approach as described in appendix A to subpart KK of this part.

**§ 63.4766 How do I determine the add-on control device emission destruction or removal efficiency?**

You must use the procedures and test methods in this section to determine the add-on control device emission destruction or removal efficiency as part of the performance test required by § 63.4760. You must conduct three test runs as specified in § 63.7(e)(3), and each test run must last at least 1 hour.

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

(1) Use Method 1 or 1A of appendix A to 40 CFR part 60, as appropriate, to

select sampling sites and velocity traverse points.

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

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

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

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

(b) Measure total gaseous organic mass emissions as carbon at the inlet and outlet of the add-on control device simultaneously, using either Method 25 or 25A of appendix A to 40 CFR part 60, as specified in paragraphs (b)(1) through (3) of this section. You must use the

same method for both the inlet and outlet measurements.

(1) Use Method 25 of appendix A to 40 CFR part 60 if the add-on control device is an oxidizer, and you expect the total gaseous organic concentration as carbon to be more than 50 parts per million (ppm) at the control device outlet.

(2) Use Method 25A of appendix A to 40 CFR part 60 if the add-on control device is an oxidizer, and you expect the total gaseous organic concentration as carbon to be 50 ppm or less at the control device outlet.

(3) Use Method 25A of appendix A to 40 CFR part 60 if the add-on control device is not an oxidizer.

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

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

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

Where:

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

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

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

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

(e) For each test run, determine the add-on control device organic emissions

destruction or removal efficiency, using Equation 2 of this section:

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

Where:

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

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

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

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

**§ 63.4767 How do I establish the emission capture system and add-on control device operating limits during the performance test?**

During the performance test required by § 63.4760 and described in §§ 63.4764, 63.4765, and 63.4766, you must establish the operating limits required by § 63.4692 according to this section, unless you have received approval for alternative monitoring and operating limits under § 63.8(f) as specified in § 63.4692.

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

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

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

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

(1) During the performance test, you must monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every 15

minutes during each of the three test runs.

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

(3) 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 (b)(4) of this section. During the performance test, you must monitor and record the temperature just before the catalyst bed at least once every 15 minutes during each of the three test runs. Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed during the performance test. This is the minimum operating limit for your catalytic oxidizer.

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

(i) Annual sampling and analysis of the catalyst activity (i.e., conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures.

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

(iii) Annual internal 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 recommendation and conduct a new performance test to determine destruction efficiency according to § 63.4766.

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

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

preceding or immediately following the performance test.

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

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

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

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

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

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

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

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

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

(f) *Emission capture system.* For each capture device that is not part of a PTE that meets the criteria of § 63.4765(a), establish an operating limit for either the gas volumetric flow rate or duct static pressure, as specified in paragraphs (f)(1) and (2) of this section. The operating limit for a PTE is specified in Table 3 to this subpart.

(1) During the capture efficiency determination required by § 63.4760 and described in §§ 63.4764 and 63.4765, you must monitor and record either the gas volumetric flow rate or the duct static pressure for each separate capture device in your emission capture system

at least once every 15 minutes during each of the three test runs at a point in the duct between the capture device and the add-on control device inlet.

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

**§ 63.4768 What are the requirements for continuous parameter monitoring system installation, operation, and maintenance?**

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

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

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

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

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

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

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

(7) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS to

provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Any period for which the monitoring system is out-of-control and data are not available for required calculations is a deviation from the monitoring requirements.

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

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

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

(ii) *Car-seal or lock-and-key valve closures.* Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. You must visually inspect the seal or closure mechanism at least once every month to ensure that the valve is maintained in the closed position, and the emissions are not diverted away from the add-on control device to the atmosphere.

(iii) *Valve closure monitoring.* Ensure that any bypass line valve is in the closed (non-diverting) position through monitoring of valve position at least once every 15 minutes. You must inspect the monitoring system at least once every month to verify that the monitor will indicate valve position.

(iv) *Automatic shutdown system.* Use an automatic shutdown system in which the coating operation is stopped when flow is diverted by the bypass line away from the add-on control device to the atmosphere when the coating operation is running. You must inspect the automatic shutdown system at least

once every month to verify that it will detect diversions of flow and shut down the coating operation.

(2) If any bypass line is opened, you must include a description of why the bypass line was opened and the length of time it remained open in the semiannual compliance reports required in § 63.4720.

(c) *Thermal oxidizers and catalytic oxidizers.* If you are using a thermal oxidizer or catalytic oxidizer as an add-on control device (including those used with concentrators or with carbon adsorbers to treat desorbed concentrate streams), you must comply with the requirements in paragraphs (c)(1) through (3) of this section:

(1) For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.

(2) For a catalytic oxidizer, you must install a gas temperature monitor in the gas stream immediately before the catalyst bed, and if you established operating limits according to § 63.4767(b)(1) and (2), also install a gas temperature monitor in the gas stream immediately after the catalyst bed.

(i) If you establish operating limits according to § 63.4767(b)(1) and (2), then you must install the gas temperature monitors both upstream and downstream of the catalyst bed. The temperature monitors must be in the gas stream immediately before and after the catalyst bed to measure the temperature difference across the bed.

(ii) If you establish operating limits according to § 63.4767(b)(3) and (4), then you must install a gas temperature monitor upstream of the catalyst bed. The temperature monitor must be in the gas stream immediately before the catalyst bed to measure the temperature.

(3) For all thermal oxidizers and catalytic oxidizers, you must meet the requirements in paragraphs (a) and (c)(3)(i) through (vii) of this section for each gas temperature monitoring device.

(i) Locate the temperature sensor in a position that provides a representative temperature.

(ii) Use a temperature sensor with a measurement sensitivity of 4 degrees Fahrenheit or 0.75 percent of the temperature value, whichever is larger.

(iii) Shield the temperature sensor system from electromagnetic interference and chemical contaminants.

(iv) If a gas temperature chart recorder is used, it must have a measurement sensitivity in the minor division of at least 20 degrees Fahrenheit.

(v) Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, you must conduct a temperature sensor validation check in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 30 degrees Fahrenheit of the process temperature sensor reading.

(vi) Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor.

(vii) At least monthly, inspect components for integrity and electrical connections for continuity, oxidation, and galvanic corrosion.

(d) *Carbon adsorbers.* If you are using a carbon adsorber as an add-on control device, you must monitor the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle, the carbon bed temperature after each regeneration and cooling cycle, and comply with paragraphs (a)(3) through (5) and (d)(1) and (2) of this section.

(1) The regeneration desorbing gas mass flow monitor must be an integrating device having a measurement sensitivity of plus or minus 10 percent capable of recording the total regeneration desorbing gas mass flow for each regeneration cycle.

(2) The carbon bed temperature monitor must have a measurement sensitivity of 1 percent of the temperature recorded or 1 degree Fahrenheit, whichever is greater, and must be capable of recording the temperature within 15 minutes of completing any carbon bed cooling cycle.

(e) *Condensers.* If you are using a condenser, you must monitor the condenser outlet (product side) gas temperature and comply with paragraphs (a) and (e)(1) and (2) of this section.

(1) The gas temperature monitor must have a measurement sensitivity of 1 percent of the temperature recorded or 1 degree Fahrenheit, whichever is greater.

(2) The temperature monitor must provide a gas temperature record at least once every 15 minutes.

(f) *Concentrators.* If you are using a concentrator, such as a zeolite wheel or rotary carbon bed concentrator, you must comply with the requirements in paragraphs (f)(1) and (2) of this section.

(1) You must install a temperature monitor in the desorption gas stream. The temperature monitor must meet the

requirements in paragraphs (a) and (c)(3) of this section.

(2) You must install a device to monitor pressure drop across the zeolite wheel or rotary carbon bed. The pressure monitoring device must meet the requirements in paragraphs (a) and (f)(2)(i) through (vii) of this section.

(i) Locate the pressure sensor(s) in or as close to a position that provides a representative measurement of the pressure.

(ii) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

(iii) Use a gauge with a minimum tolerance of 0.5 inch of water or a transducer with a minimum tolerance of 1 percent of the pressure range.

(iv) Check the pressure tap daily.

(v) Using a manometer, check gauge calibration quarterly and transducer calibration monthly.

(vi) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

(vii) At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.

(g) *Emission capture systems.* The capture system monitoring system must comply with the applicable requirements in paragraphs (g)(1) and (2) of this section.

(1) For each flow measurement device, you must meet the requirements in paragraphs (a) and (g)(1)(i) through (iv) of this section.

(i) Locate a flow sensor in a position that provides a representative flow measurement in the duct from each capture device in the emission capture system to the add-on control device.

(ii) Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(iii) Conduct a flow sensor calibration check at least semiannually.

(iv) At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.

(2) For each pressure drop measurement device, you must comply with the requirements in paragraphs (a) and (g)(2)(i) through (vi) of this section.

(i) Locate the pressure sensor(s) in or as close to a position that provides a representative measurement of the pressure drop across each opening you are monitoring.

(ii) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

(iii) Check pressure tap pluggage daily.



(iv) Using an inclined manometer with a measurement sensitivity of 0.0002 inch water, check gauge calibration quarterly and transducer calibration monthly.

(v) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

(vi) At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.

### Other Requirements and Information

#### § 63.4780 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the EPA, or a delegated authority such as your State, local, or tribal agency. If the Administrator has delegated authority to your State, local, or tribal agency, then that agency, in addition to the EPA, has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

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

(c) The authorities that will not be delegated to State, local, or tribal agencies are listed in paragraphs (c)(1) through (4) of this section:

(1) Approval of alternatives to the work practice standards under § 63.4693.

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(3) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(4) Approval of major changes to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

#### § 63.4781 What definitions apply to this subpart?

Terms used in this subpart are defined in the CAA, in 40 CFR 63.2, the General Provisions of this part, and in this section as follows:

*Add-on control* means an air pollution control device, such as a thermal oxidizer or carbon adsorber, that reduces pollution in an air stream by destruction or removal before discharge to the atmosphere.

*Adhesive* means any chemical substance that is applied for the purpose of bonding two surfaces together.

*Capture device* means a hood, enclosure, room, floor sweep, or other means of containing or collecting emissions and directing those emissions into an add-on air pollution control device.

*Capture efficiency* or *capture system efficiency* means the portion (expressed as a percentage) of the pollutants from an emission source that is delivered to an add-on control device.

*Capture system* means one or more capture devices intended to collect emissions generated by a coating operation in the use of coatings or cleaning materials, both at the point of application and at subsequent points where emissions from the coatings or cleaning materials occur, such as flashoff, drying, or curing. As used in this subpart, multiple capture devices that collect emissions generated by a coating operation are considered a single capture system.

*Cleaning material* means a solvent used to remove contaminants and other materials, such as dirt, grease, oil, and dried or wet coating (e.g., depainting), from a substrate before or after coating application or from equipment associated with a coating operation, such as spray booths, spray guns, racks, tanks, and hangers. Thus, it includes any cleaning material used on substrates or equipment or both.

*Coating* means a material applied to a substrate for decorative, protective, or functional purposes. Such materials include, but are not limited to, paints, sealants, caulks, inks, adhesives, and maskants. Decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances are not considered coatings for the purposes of this subpart.

*Coating operation* means equipment used to apply cleaning materials to a substrate to prepare it for coating application or to remove dried coating (surface preparation); to apply coating to a substrate (coating application) and to dry or cure the coating after application; or to clean coating operation equipment (equipment cleaning). A single coating operation may include any combination of these types of equipment, but always includes at least the point at which a coating or cleaning material is applied and all subsequent points in the affected source where organic HAP emissions from that coating or cleaning material occur. There may be multiple coating operations in an affected source. Coating application with hand-held nonrefillable aerosol containers,

touchup markers, or marking pens is not a coating operation for the purposes of this subpart.

*Coating solids* means the nonvolatile portion of the coating that makes up the dry film.

*Continuous parameter monitoring system* means the total equipment that may be required to meet the data acquisition and availability requirements of this subpart used to sample, condition (if applicable), analyze, and provide a record of coating operation, or capture system, or add-on control device parameters.

*Controlled coating operation* means a coating operation from which some or all of the organic HAP emissions are routed through an emission capture system and add-on control device.

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limit, or operating limit, or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limit, or operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

*Emission limitation* means an emission limit, operating limit, or work practice standard.

*Enclosure* means a structure that surrounds a source of emissions and captures and directs the emissions to an add-on control device.

*Exempt compound* means a specific compound that is not considered a VOC due to negligible photochemical reactivity. The exempt compounds are listed in 40 CFR 51.100(s).

*Finished wood product* means any wood building product to which a protective, decorative, or functional layer has been applied. Materials used include, but are not limited to, paints, stains, sealers, topcoats, basecoats, primers, enamels, inks, and adhesives.

*Laminated wood product* means any wood building product to which a protective, decorative, or functional layer has been bonded with an adhesive. Products that are produced by bonding layers to the substrate as a part of the substrate manufacturing process are not considered laminated products under this subpart.

*Manufacturer's formulation data* means data on a material (such as a coating) that are supplied by the material manufacturer based on knowledge of the ingredients used to manufacture that material, rather than based on testing of the material with the test methods specified in § 63.4741. Manufacturer's formulation data may include, but are not limited to, information on density, organic HAP content, volatile organic matter content, and coating solids content.

*Mass fraction of organic HAP* means the ratio of the mass of organic HAP to the mass of a material in which it is contained, expressed as kg of organic HAP per kg of material.

*Month* means a calendar month or a pre-specified period of 28 days to 35 days to allow for flexibility in recordkeeping when data are based on a business accounting period.

*Organic HAP content* means the mass of organic HAP per volume of coating solids for a coating calculated using Equation 1 of § 63.4741. The organic HAP content is determined for the coating in the condition it is in when received from its manufacturer or supplier and does not account for any alteration after receipt.

*Permanent total enclosure (PTE)* means a permanently installed enclosure that meets the criteria of Method 204 of appendix M, 40 CFR part 51, for a PTE and that directs all the exhaust gases from the enclosure to an add-on control device.

*Protective oil* means an organic material that is applied to metal for the purpose of providing lubrication or protection from corrosion without forming a solid film. This definition of protective oil includes, but is not limited to, lubricating oils, evaporative oils (including those that evaporate completely), and extrusion oils.

*Research or laboratory facility* means a facility whose primary purpose is for research and development of new processes and products, that is conducted under the close supervision of technically trained personnel, and is not engaged in the manufacture of final or intermediate products for commercial purposes, except in a de minimis manner.

*Responsible official* means responsible official as defined in 40 CFR 70.2.

*Startup, initial* means the first time equipment is brought online in a facility.

*Surface preparation* means use of a cleaning material on a portion of or all of a substrate. This includes use of a cleaning material to remove dried coating, which is sometimes called "depainting."

*Temporary total enclosure* means an enclosure constructed for the purpose of measuring the capture efficiency of pollutants emitted from a given source as defined in Method 204 of appendix M, 40 CFR part 51.

*Thinner* means an organic solvent that is added to a coating after the coating is received from the supplier.

*Tileboard* means hardboard that meets the specifications for Class I given by the standard ANSI/AHA A135.4-1995 as approved by the American National Standards Institute. The standard specifies requirements and test methods for water absorption, thickness swelling, modulus of rupture, tensile strength, surface finish, dimensions, squareness, edge straightness, and moisture content for five classes of hardboard. Tileboard is also known as Class I hardboard or tempered hardboard.

*Total volatile hydrocarbon (TVH)* means the total amount of nonaqueous volatile organic matter determined according to Methods 204 and 204A through 204F of appendix M to 40 CFR part 51 and substituting the term TVH each place in the methods where the term VOC is used. The TVH includes both VOC and non-VOC.

*Uncontrolled coating operation* means a coating operation from which none of the organic HAP emissions are routed through an emission capture system and add-on control device.

*Volatile organic compound (VOC)* means any compound defined as VOC in 40 CFR 51.100(s).

*Volume fraction of coating solids* means the ratio of the volume of coating solids (also known as volume of nonvolatiles) to the volume of coating; liters of coating solids per liter of coating.

*Wastewater* means water that is generated in a coating operation and is collected, stored, or treated prior to being discarded or discharged.

**Tables**

You must comply with the emission limits that apply to your affected source in the following table as required by § 63.4690:

TABLE 1 TO SUBPART QQQQ OF PART 63.—EMISSION LIMITS FOR NEW OR RECONSTRUCTED AFFECTED SOURCES

If the affected source applies coating to products in the following subcategory . . .	Then, the organic HAP emission limit for the affected source, in kg HAP/liter solids (lb HAP/gal solids) <sup>1, 2</sup> is:
1. Doors and windows .....	0.06 (0.48)
2. Flooring .....	0.00 (0.00)
3. Interior wall paneling or tileboard .....	0.00 (0.04)
4. Other interior panels .....	0.00 (0.00)
5. Exterior siding, doorskins, and miscellaneous .....	0.00 (0.00)

<sup>1</sup> Determined as a rolling 12-month emission rate according to the requirements in § 63.4741, § 63.4751, or § 63.4761, as applicable.

<sup>2</sup> If the affected source applies coatings to products in more than one of the subcategories listed in the table, then you must determine the applicable emission limit according to § 63.4690(c).

You must comply with the emission limits that apply to your affected source in the following table as required by § 63.4690:

TABLE 2 TO SUBPART QQQQ OF PART 63.—EMISSION LIMITS FOR EXISTING AFFECTED SOURCES

If the affected source applies coating to products in the following subcategory . . .	Then, the organic HAP emission limit for the affected source, in kg HAP/liter solids (lb HAP/gal solids) <sup>1, 2</sup> is:
1. Doors and windows .....	0.17 (1.45)
2. Flooring .....	0.09 (0.78)
3. Interior wall paneling or tileboard .....	0.18 (1.53)
4. Other interior panels .....	0.00 (0.01)
5. Exterior siding, doorskins, and miscellaneous .....	0.01 (0.06)

<sup>1</sup> Determined as a rolling 12-month emission rate according to the requirements in § 63.4741, § 63.4751, or § 63.4761, as applicable.

<sup>2</sup> If the affected source applies coatings to products in more than one of the subcategories listed in the table, then you must determine the applicable emission limit according to § 63.4690(c).

If you are required to comply with operating limits by § 63.4692, you must comply with the applicable operating limits in the following table:

TABLE 3 TO SUBPART QQQQ OF PART 63.—OPERATING LIMITS IF USING THE EMISSION RATE WITH ADD-ON CONTROLS OPTION

For the following device . . .	You must meet the following operating limit . . .	And you must demonstrate continuous compliance with the operating limit by . . .
1. Thermal oxidizer .....	a. The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to § 63.4767(a).	i. Collecting the combustion temperature data according to § 63.4768(c); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average combustion temperature at or above the temperature limit.
2. Catalytic oxidizer .....	a. The average temperature measured just before the catalyst bed in any 3-hour period must not fall below the limit established according to § 63.4767(b).  b. Either ensure that the average temperature difference across the catalyst bed in any 3-hour period does not fall below the temperature difference limit established according to § 63.4767(b)(2) or develop and implement an inspection and maintenance plan according to § 63.4767(b)(3) and (4).	i. Collecting the temperature data according to § 63.4768(c); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average temperature before the catalyst bed at or above the temperature limit.  i. Either collecting the temperature data according to § 63.4768(c), reducing the data to 3-hour block averages, and maintaining the 3-hour average temperature difference at or above the temperature difference limit; or ii. Complying with the inspection and maintenance plan developed according to § 63.4767(b)(3) and (4).
3. Carbon adsorber .....	a. The total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each carbon bed regeneration cycle must not fall below the total regeneration desorbing gas mass flow limit established according to § 63.4767(c).  b. The temperature of the carbon bed, after completing each regeneration and any cooling cycle, must not exceed the carbon bed temperature limit established according to § 63.4767(c).	i. Measuring the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle according to § 63.4768(d); and ii. Maintaining the total regeneration desorbing gas mass flow at or above the mass flow limit.  i. Measuring the temperature of the carbon bed, after completing each regeneration and any cooling cycle, according to § 63.4768(d); and ii. Operating the carbon beds such that each carbon bed is not returned to service until completing each regeneration and any cooling cycle until the recorded temperature of the carbon bed is at or below the temperature limit.
4. Condenser .....	a. The average condenser outlet (product side) gas temperature in any 3-hour period must not exceed the temperature limit established according to § 63.4767(d).	i. Collecting the condenser outlet (product side) gas temperature according to § 63.4768(e); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average gas temperature at the outlet at or below the temperature limit.
5. Emission capture system that is a PTE according to § 63.4765(a).	a. The direction of the air flow at all times must be into the enclosure; and either.  b. The average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minute; or. c. The pressure drop across the enclosure must be at least 0.007 inch H <sub>2</sub> O, as established in Method 204 of appendix M to 40 CFR part 51.	i. Collecting the direction of air flow; and either the facial velocity of air through all natural draft openings according to § 63.4768(f)(1) or the pressure drop across the enclosure according to § 63.4768(f)(2); and ii. Maintaining the facial velocity of air flow through all natural draft openings or the pressure drop at or above the facial velocity limit or pressure drop limit, and maintaining the direction of air flow into the enclosure at all times.  i. See items 5a.i. and ii.  i. See items 5a.i. and ii.

TABLE 3 TO SUBPART QQQQ OF PART 63.—OPERATING LIMITS IF USING THE EMISSION RATE WITH ADD-ON CONTROLS OPTION—Continued

For the following device . . .	You must meet the following operating limit . . .	And you must demonstrate continuous compliance with the operating limit by . . .
6. Emission capture system that is not a PTE according to § 63.4765(a).	a. The average gas volumetric flow rate or duct static pressure in each duct between a capture device and add-on control device inlet in any 3-hour period must not fall below the average volumetric flow rate or duct static pressure limit established for that capture device according to § 63.4747(e).	i. collecting the gas volumetric flow rate or duct static pressure for each capture device according to § 63.4768(f); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average gas volumetric flow rate or duct static pressure for each capture device at or above the gas volumetric flow rate or duct static pressure limit.
7. Concentrators, including zeolite wheels and rotary carbon adsorbers.	a. The average gas temperature of the desorption concentrate stream in any 3-hour period must not fall below the limit established according to § 63.4767(g).  b. The average pressure drop of the dilute stream across the concentrator in any 3-hour period must not fall below the limit established according to § 63.4767(g).	i. Collecting the temperature data according to § 63.4768(g); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average temperature at or above the temperature limit.  i. Collecting the pressure drop data according to § 63.4768(g); and ii. Reducing the pressure drop data to 3-hour block averages; and iii. Maintaining the 3-hour average pressure drop at or above the pressure drop limit.

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

TABLE 4 TO SUBPART QQQQ OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART QQQQ OF PART 63

Citation	Subject	Applicable to subpart QQQQ	Explanation
§ 63.1(a)(1)–(14)	General Applicability	Yes.	
§ 63.1(b)(1)–(3)	Initial Applicability Determination	Yes	Applicability to subpart QQQQ is also specified in § 63.4681.
§ 63.1(c)(1)	Applicability After Standard Established.	Yes.	
§ 63.1(c)(2)–(3)	Applicability of Permit Program for Area Sources.	No	Area sources are not subject to subpart QQQQ.
§ 63.1(c)(4)–(5)	Extensions and Notifications	Yes.	
§ 63.1(e)	Applicability of Permit Program Before Relevant Standard is Set.	Yes.	
§ 63.2	Definitions	Yes	Additional definitions are specified in § 63.4781.
§ 63.3(a)–(c)	Units and Abbreviations	Yes.	
§ 63.4(a)(1)–(5)	Prohibited Activities	Yes.	
§ 63.4(b)–(c)	Circumvention/Severability	Yes.	
§ 63.5(a)	Construction/Reconstruction	Yes.	
§ 63.5(b)(1)–(6)	Requirements for Existing, Newly Constructed, and Reconstructed Sources.	Yes.	
§ 63.5(d)	Application for Approval of Construction/Reconstruction.	Yes.	
§ 63.5(e)	Approval of Construction/Reconstruction.	Yes.	

TABLE 4 TO SUBPART QQQQ OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART QQQQ OF PART 63—Continued

Citation	Subject	Applicable to subpart QQQQ	Explanation
§ 63.5(f) .....	Approval of Construction/Reconstruction Based on Prior State Review.	Yes.	
§ 63.6(a) .....	Compliance With Standards and Maintenance Requirements—Applicability.	Yes.	
§ 63.6(b)(1)–(7) .....	Compliance Dates for New and Reconstructed Sources.	Yes	§ 63.4683 specifies the compliance dates.
§ 63.6(c)(1)–(5) .....	Compliance Dates for Existing Sources.	Yes	§ 63.4683 specifies the compliance dates.
§ 63.6(e)(1)–(2) .....	Operation and Maintenance .....	Yes.	
§ 63.6(e)(3) .....	Startup, Shutdown, and Malfunction Plan.	Yes	Only sources using an add-on control device to comply with the standard must complete startup, shutdown, and malfunction plans.
§ 63.6(f)(1) .....	Compliance Except during Startup, Shutdown, and Malfunction.	Yes	Applies only to sources using an add-on control device to comply with the standard.
§ 63.6(f)(2)–(3) .....	Methods for Determining Compliance.	Yes.	
§ 63.6(g)(1)–(3) .....	Use of an Alternative Standard ....	Yes.	
§ 63.6(h) .....	Compliance With Opacity/Visible Emission Standards.	No	Subpart QQQQ does not establish opacity standards and does not require continuous opacity monitoring systems (COMS).
§ 63.6(i)(1)–(16) .....	Extension of Compliance .....	Yes.	
§ 63.6(j) .....	Presidential Compliance Exemption.	Yes.	
§ 63.7(a)(1) .....	Performance Test Requirements—Applicability.	Yes	Applies to all affected sources. Additional requirements for performance testing are specified in §§ 63.4764, 63.4765, and 63.4766.
§ 63.7(a)(2) .....	Performance Test Requirements—Dates.	Yes .....	Applies only to performance tests for capture system and control device efficiency at sources using these to comply with the standard. § 63.4760 specifies the schedule for performance test requirements that are earlier than those specified in § 63.7(a)(2).
§ 63.7(a)(3) .....	Performance Tests Required by the Administrator.	Yes.	
§ 63.7(b)–(e) .....	Performance Test Requirements—Notification, Quality Assurance, Facilities Necessary for Safe Testing, Conditions During Test.	Yes .....	Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standard.
§ 63.7(f) .....	Performance Test Requirements—Use of Alternative Test Method.	Yes .....	Applies to all test methods except those used to determine capture system efficiency.

TABLE 4 TO SUBPART QQQQ OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART QQQQ OF PART 63—Continued

Citation	Subject	Applicable to subpart QQQQ	Explanation
§ 63.7(g)–(h) .....	Performance Test Requirements—Data Analysis, Record-keeping, Reporting, Waiver of Test.	Yes .....	Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standard.
§ 63.8(a)(1)–(3) .....	Monitoring Requirements—Applicability.	Yes .....	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standard. Additional requirements for monitoring are specified in § 63.4768.
§ 63.8(a)(4) .....	Additional Monitoring Requirements.	No .....	Subpart QQQQ does not have monitoring requirements for flares.
§ 63.8(b) .....	Conduct of Monitoring .....	Yes.	
§ 63.8(c)(1)–(3) .....	Continuous Monitoring System (CMS) Operation and Maintenance.	Yes .....	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standard. Additional requirements for CMS operations and maintenance are specified in § 63.4768.
§ 63.8(c)(4) .....	CMSs .....	No .....	§ 63.4768 specifies the requirements for the operation of CMS for capture systems and add-on control devices at sources using these to comply.
§ 63.8(c)(5) .....	COMS .....	No .....	Subpart QQQQ does not have opacity or visible emission standards.
§ 63.8(c)(6) .....	CMS Requirements .....	No .....	§ 63.4768 specifies the requirements for monitoring systems for capture systems and add-on control devices at sources using these to comply.
§ 63.8(c)(7) .....	CMS Out-of-Control Periods .....	Yes.	
§ 63.8(c)(8) .....	CMS out-of-control periods reporting.	No .....	§ 63.4720 requires reporting of CMS out-of-control periods.
§ 63.8(d)–(e) .....	Quality Control Program and CMS Performance Evaluation.	No .....	Subpart QQQQ does not require the use of continuous emissions monitoring systems.
§ 63.8(f)(1)–(5) .....	Use of an Alternative Monitoring Method.	Yes.	
§ 63.8(f)(6) .....	Alternative to Relative Accuracy Test.	No .....	Subpart QQQQ does not require the use of continuous emissions monitoring systems.
§ 63.8(g)(1)–(5) .....	Data Reduction .....	No .....	§§ 63.4767 and 63.4768 specify monitoring data reduction.
§ 63.9(a)–(d) .....	Notification Requirements .....	Yes.	

TABLE 4 TO SUBPART QQQQ OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART QQQQ OF PART 63—Continued

Citation	Subject	Applicable to subpart QQQQ	Explanation
§ 63.9(e)	Notification of Performance Test ..	Yes .....	Applies only to capture system and add-on control device performance tests at sources using these to comply with the standard.
§ 63.9(f)	Notification of Visible Emissions/Opacity Test.	No .....	Subpart QQQQ does not have opacity or visible emission standards.
§ 63.9(g)(1)–(3)	Additional Notifications When Using CMS.	No .....	Subpart QQQQ does not require the use of continuous emissions monitoring systems.
§ 63.9(h)	Notification of Compliance Status	Yes .....	§ 63.4710 specifies the dates for submitting the notification of compliance status.
§ 63.9(i)	Adjustment of Submittal Deadlines.	Yes.	
§ 63.9(j)	Change in Previous Information ...	Yes.	
§ 63.10(a)	Recordkeeping/Reporting—Applicability and General Information.	Yes.	
§ 63.10(b)(1)	General Recordkeeping Requirements.	Yes .....	Additional requirements are specified in §§ 63.4730 and 63.4731.
§ 63.10(b)(2)(i)–(v)	Recordkeeping Relevant to Startup, Shutdown, and Malfunction Periods and CMS.	Yes .....	Requirements for Startup, Shutdown, and Malfunction records only apply to add-on control devices used to comply with the standard.
§ 63.10(b)(2)(vi)–(xi)	.....	Yes.	
§ 63.10(b)(2)(xii)	Records .....	Yes.	
§ 63.10(b)(2)(xiii)	.....	No .....	Subpart QQQQ does not require the use of continuous emissions monitoring systems.
§ 63.10(b)(2)(xiv)	.....	Yes.	
§ 63.10(b)(3)	Recordkeeping Requirements for Applicability Determinations.	Yes.	
§ 63.10(c)(1)–(6)	Additional Recordkeeping Requirements for Sources with CMS.	Yes.	
§ 63.10(c)(7)–(8)	.....	No .....	The same records are required in § 63.4720(a)(7).
§ 63.10(c)(9)–(15)	.....	Yes.	
§ 63.10(d)(1)	General Reporting Requirements	Yes .....	Additional requirements are specified in § 63.4720.
§ 63.10(d)(2)	Report of Performance Test Results.	Yes .....	Additional requirements are specified in § 63.4720(b).
§ 63.10(d)(3)	Reporting Opacity or Visible Emissions Observations.	No .....	Subpart QQQQ does not require opacity or visible emissions observations.
§ 63.10(d)(4)	Progress Reports for Sources With Compliance Extensions.	Yes.	

TABLE 4 TO SUBPART QQQQ OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART QQQQ OF PART 63—Continued

Citation	Subject	Applicable to subpart QQQQ	Explanation
§ 63.10(d)(5) .....	Startup, Shutdown, and Malfunction Reports.	Yes .....	Applies only to add-on control devices at sources using these to comply with the standard.
§ 63.10(e)(1)–(2) .....	Additional CMS Reports .....	No .....	Subpart QQQQ does not require the use of continuous emissions monitoring systems.
§ 63.10(e)(3) .....	Excess Emissions/CMS Performance Reports.	No .....	§ 63.4720(b) specifies the contents of periodic compliance reports.
§ 63.10(e)(4) .....	COMS Data Reports .....	No .....	Subpart QQQQ does not specify requirements for opacity or COMS.
§ 63.10(f) .....	Recordkeeping/Reporting Waiver	Yes.	
§ 63.11 .....	Control Device Requirements/Flares.	No .....	Subpart QQQQ does not specify use of flares for compliance.
§ 63.12 .....	State Authority and Delegations ...	Yes.	
§ 63.13 .....	Addresses .....	Yes.	
§ 63.14 .....	Incorporation by Reference .....	Yes.	
§ 63.15 .....	Availability of Information/Confidentiality.	Yes.	

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data:

TABLE 5 TO SUBPART QQQQ OF PART 63.—DEFAULT ORGANIC HAP MASS FRACTION FOR SOLVENTS AND SOLVENT BLENDS

Solvent/solvent blend	CAS. No.	Average organic HAP mass fraction	Typical organic HAP, percent by mass
1. Toluene .....	108–88–3	1.0	Toluene.
2. Xylene(s) .....	1330–20–7	1.0	Xylenes, ethylbenzene.
3. Hexane .....	110–54–3	0.5	n-hexane.
4. n-Hexane .....	110–54–3	1.0	n-hexane.
5. Ethylbenzene .....	100–41–4	1.0	Ethylbenzene.
6. Aliphatic 140 .....	.....	0	None.
7. Aromatic 100 .....	.....	0.02	1% xylene, 1% cumene.
8. Aromatic 150 .....	.....	0.09	Naphthalene.
9. Aromatic naphtha .....	64742–95–6	0.02	1% xylene, 1% cumene.
10. Aromatic solvent .....	64742–94–5	0.1	Naphthalene.
11. Exempt mineral spirits .....	8032–32–4	0	None.
12. Lignoines (VM & P) .....	8032–32–4	0	None.
13. Lactol spirits .....	64742–89–6	0.15	Toluene.
14. Low aromatic white spirit .....	64742–82–1	0	None.
15. Mineral spirits .....	64742–88–7	0.01	Xylenes.
16. Hydrotreated naphtha .....	64742–48–9	0	None.



TABLE 5 TO SUBPART QQQQ OF PART 63.—DEFAULT ORGANIC HAP MASS FRACTION FOR SOLVENTS AND SOLVENT BLENDS—Continued

Solvent/solvent blend	CAS. No.	Average organic HAP mass fraction	Typical organic HAP, percent by mass
17. Hydrotreated light distillate .....	64742–47–8	0.001	Toluene.
18. Stoddard solvent .....	8052–41–3	0.01	Xylenes.
19. Super high-flash naphtha .....	64742–95–6	0.05	Xylenes.
20. Varsol® solvent .....	8052–49–3	0.01	0.5% xylenes, 0.5% ethylbenzene.
21. VM & P naphtha .....	64742–89–8	0.06	3% toluene, 3% xylene.
22. Petroleum distillate mixture .....	68477–31–6	0.08	4% naphthalene, 4% biphenyl.

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data:

TABLE 6 TO SUBPART QQQQ OF PART 63.—DEFAULT ORGANIC HAP MASS FRACTION FOR PETROLEUM SOLVENT GROUPS<sup>a</sup>

Solvent type	Average organic HAP mass fraction	Typical organic HAP, percent by mass
Aliphatic <sup>b</sup> .....	0.03	1% xylene, 1% toluene, and 1% ethylbenzene.
Aromatic <sup>c</sup> .....	0.06	4% xylene, 1% toluene, and 1% ethylbenzene.

<sup>a</sup> Use this table only if the solvent blend does not match any of the solvent blends in Table 5 to this subpart and you only know whether the blend is aliphatic or aromatic.

<sup>b</sup> e.g., Mineral Spirits 135, Mineral Spirits 150 EC, Naphtha, Mixed Hydrocarbon, Aliphatic Hydrocarbon, Aliphatic Naphtha, Naphthol Spirits, Petroleum Spirits, Petroleum Oil, Petroleum Naphtha, Solvent Naphtha, Solvent Blend.

<sup>c</sup> e.g., Medium-flash Naphtha, High-flash Naphtha, Aromatic Naphtha, Light Aromatic Naphtha, Light Aromatic Hydrocarbons, Aromatic Hydrocarbons, Light Aromatic Solvent.

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