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National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Furniture; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[FRL–7163–6]

RIN 2060–AG55

National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Furniture

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: This action proposes national emission standards for hazardous air pollutants (NESHAP) for metal furniture surface coating operations located at major sources of hazardous air pollutant (HAP) emissions. These proposed standards would implement section 112(d) of the Clean Air Act (CAA) by requiring these operations to meet HAP emission standards reflecting the application of the maximum achievable control technology (MACT). The primary HAP emitted by these operations are xylene, toluene, glycol ethers, 2-butoxy ethanol, ethylbenzene, and methyl ethyl ketone. Each of the HAP can cause toxic effects such as eye, nose, throat, and skin irritation, and blood cell, heart, liver, and kidney damage. Implementation of the proposed standards would reduce nationwide HAP emissions from major sources by about 70 percent.

DATES: *Comments.* Submit comments on or before June 24, 2002. *Public Hearing.* If anyone wishes to contact EPA to request to speak at a public hearing, they should do so by May 14, 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–97–40, U.S. Environmental Protection Agency, 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–97–40, U.S. Environmental Protection Agency, 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 Products Group, Emission Standards Division (C539–03), U.S. Environmental Protection Agency, 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–97–40 contains supporting information used in developing the proposed standards. The docket is located at the U.S. Environmental Protection Agency, 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: Dr. Mohamed Serageldin, Coatings and Consumer Products Group, Emission Standards Division (C539–03), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711; telephone number (919) 541–2379; facsimile number (919) 541–5689; electronic mail (e-mail) address: *serageldin.mohamed@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–97–40. 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: Dr. Mohamed Serageldin, c/o OAQPS Document Control Officer (C404–02), U.S. Environmental Protection Agency, 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. Environmental Protection Agency, Research Triangle Park, North Carolina 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 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 these 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 CAA.) The regulatory text and other materials related to this rulemaking are available for review in the docket or copies may be obtained by mail 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 is also available on the WWW through the Technology Transfer Network (TTN). Following signature by the EPA 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 proposed source category definition includes facilities that apply coatings to metal furniture or components of metal furniture. Metal furniture means furniture or components of furniture that are constructed either entirely or partially from metal. Metal furniture includes, but is not limited to, components of the following types of products as well as the products themselves: household, office, institutional, laboratory, hospital, public building, restaurant, barber and beauty shop, and dental furniture; office and store fixtures; partitions; shelving; lockers; lamps and lighting fixtures; and wastebaskets.

In general, facilities that coat metal furniture 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 regulation if they meet the applicability criteria. Not all facilities classified under the SIC and NAICS codes in table 1 will be subject to the proposed standard because some of the classifications cover products outside the scope of the proposed NESHAP for metal furniture.

TABLE 1.—METAL FURNITURE PRODUCT DESCRIPTIONS AND CORRESPONDING SIC AND NAICS CODES

Product description	1987 SIC Code	Equivalent 1997 NAICS Code(s)	Equivalent 1997 NAICS Product Description
Metal Household Furniture	2514	337124	Metal Household Furniture Manufacturing.
Office Furniture, Except Wood	2522	337214	Nonwood Office Furniture Manufacturing.
Public Building and Related Furniture	2531	337127	Institutional Furniture Manufacturing.
Office and Store Fixtures, Partitions, Shelving, and Lockers, Except Wood.	2542	337215	Showcase, Partition, Shelving, and Locker Manufacturing.
Furniture and Fixtures, Not Classified Elsewhere	2599	337127	Institutional Furniture Manufacturing.
Hardware, Not Classified Elsewhere	3429	332951	Hardware Manufacturing.
Metal Stampings, Not Classified Elsewhere (Except Kitchen Utensils, Pots and Pans for Cooking, and Coins).	3469	332116	Metal Stamping.
Wire Springs	3495	332612	Wire Spring Manufacturing.
Fabricated Metal Products, Not Classified Elsewhere	3499	337215	Showcase, Partition, Shelving, and Locker Manufacturing.
Residential Electric Lighting Fixtures	3645	335121	Residential Electric Lighting Fixture Manufacturing.
Commercial, Industrial, and Institutional Electric Lighting Fixtures	3646	335122	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing.
Laboratory Apparatus and Furniture	3821	339111	Laboratory Furniture Manufacturing.
Dental Equipment and Supplies	3843	339114	Dental Equipment Manufacturing.
Manufacturing Industries, Not Classified Elsewhere	3999	337127	Institutional Furniture Manufacturing.
Reupholster and Furniture Repair	7641	81142	Reupholstery and Furniture Repair.
State/Federal Governmental Agencies	....	....	State correctional institutions and military installations that apply coatings to metal furniture.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your coating operation would be regulated by this proposed action, you should examine the applicability criteria in § 63.4881 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.

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

I. Background
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  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 certain area sources of HAP and to establish NESHAP for the listed source categories and subcategories. The Surface Coating of Metal Furniture category of major sources was listed on July 16, 1992 (57 FR 31576) under the Surface Coating Processes industry group. Major sources of HAP are those that, considering controls, emit or have the potential to emit equal to, or greater than, 10 tons per year (tpy) of any one HAP or 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 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 a 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 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 sources, but they cannot be less stringent than the average emission limitation 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 nonair quality health and environmental impacts, and energy requirements.

C. What Are the Health Effects Associated with HAP Emissions From the Surface Coating of Metal Furniture?

The major HAP emitted from the surface coating of metal furniture include xylene, toluene, glycol ethers, 2-butoxy ethanol, ethylbenzene, and methyl ethyl ketone. These compounds account for about 90 percent of the nationwide HAP emissions from this source category. Other HAP identified in emissions include methyl isobutyl ketone, hexane, and methylene chloride. These pollutants can cause reversible or irreversible toxic effects following sufficient exposure. The potential toxic effects include eye, nose, throat, and skin irritation; nausea, vomiting, headache, and dizziness, and liver and kidney damage.

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

II. Summary of the Proposed Rule

A. What Source Categories Would Be Affected by This Proposed Rule?

The proposed rule would apply to you if you own or operate a metal furniture surface coating facility that is a major source, or is located at a major source, or is part of a major source of HAP emissions. We have defined a metal furniture surface coating facility as one that applies coatings to metal furniture or components of metal furniture. Metal furniture means furniture or components that are constructed either entirely or partially from metal.

You would not be subject to the proposed rule if your metal furniture 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.

You would not be subject to the proposed rule if you use only coatings, thinners, and cleaning materials that contain no organic HAP.

The source category does not include research or laboratory facilities or janitorial, building, and facility maintenance operations; or coating application 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. The relationship between this proposed rule and other rules is discussed below. We specifically request comments on how monitoring, recordkeeping, and reporting requirements can be consolidated for sources that are subject to more than one rule. We also request comments regarding instances where a facility could be subject to multiple surface coating NESHAP or where the applicability of one NESHAP versus another is unclear. Commenters should provide specific examples of these instances and discuss any associated adverse effects that would result.

New Source Performance Standards—40 CFR Part 60, Subpart EE. The metal furniture new source performance standards (NSPS) apply to facilities that apply organic coatings to metal furniture and that began construction, reconstruction, or modification after November 28, 1980. The pollutants regulated are volatile organic compounds (VOC). Emissions of VOC are limited to 0.09 kilogram (kg) per liter of coating solids applied, and the affected source is each individual coating operation.

The proposed rule differs from the NSPS in three ways. First, the affected source for the proposed rule is defined broadly as the collection of all coating operations and related activities and equipment at the facility, whereas the affected facility for the NSPS is defined narrowly as each individual coating operation. This broader definition of affected source allows a facility's emissions to be combined for compliance purposes. Second, the proposed rule would regulate organic HAP. While most organic HAP emitted from metal furniture surface coating operations are VOC, some VOC are not listed as HAP and, therefore, the NSPS regulates a broader range of pollutants than would the proposed NESHAP. Third, the emission limitations in the proposed rule would be based on the amount of solids used at the affected source. The NSPS limitations are based on the amount of solids actually applied to the metal furniture which necessitates estimates of transfer efficiency in the compliance calculations.

Because of the differences between the two rules, compliance with either rule cannot be deemed compliance with the other. A metal furniture surface coating facility that meets the applicability requirements of both rules must comply with both. Overlapping reporting, recordkeeping, and monitoring requirements may be resolved through the title V permit process.

National Emission Standards for Wood Furniture Manufacturing Operations—40 CFR Part 63, Subpart JJ. There may be situations where a manufacturer of wood furniture also coats metal components of that wood furniture. The coating of these metal components would be subject to subpart JJ, the rule for wood furniture manufacturing. As such, the proposed rule would not apply to these facilities. The applicability section of the proposed rule clarifies this difference in applicability.

Future national emission standards for the surface coating of miscellaneous metal parts. Metal furniture often contains components, such as metal knobs, hinges, and screws, that have a wider use beyond metal furniture. The coating of such parts would not be subject to the proposed rule provided the coating takes place at a facility that does not apply coatings to other metal furniture. Such metal coating operations would be subject to the future NESHAP for the surface coating of miscellaneous metal parts.

Future national emission standards for the surface coating of plastic parts and products. Plastic parts and products may be components (e.g., plastic handles) of metal furniture. The coating of such plastic parts would be subject to the proposed rule if the coating takes place at a metal furniture surface coating facility; otherwise, the coating operation would be subject to the future NESHAP for the surface coating of plastic parts and products.

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

HAP Emission Sources. Emissions from coating application account for more than 60 percent of HAP emissions from the metal furniture surface coating process. Remaining emissions are primarily from cleaning. In most cases, HAP emissions from mixing and storage are relatively small. The organic HAP emissions associated with coatings (the term ‘‘coatings’’ includes protective and functional coatings, as well as adhesives) occur at several points. A coating is most often applied by using a spray gun in a spray booth or by dipping the substrate in a tank containing the coating. In a spray booth, volatile components evaporate from the coating applied to the part, as well as from the overspray. The coated part then passes through an open (flash-off) area where additional volatiles evaporate from the coating. The coated part then passes through a drying/curing oven, or is allowed to air dry, where the remaining volatiles are evaporated.

Organic HAP emissions also occur from the activities undertaken during cleaning, where solvent is applied to remove coating residue or other unwanted materials. Cleaning in this industry includes cleaning of spray guns and transfer lines (e.g., tubing or piping), tanks, and the interior of spray booths. Cleaning also includes applying solvents to manufactured parts prior to coating application and to equipment (e.g., cleaning rollers, pumps, conveyors, etc.).

Mixing and Storage. Organic HAP emissions can also occur from displacement of organic vapor-laden air in containers used to store HAP solvents or to mix coatings containing HAP solvents. The displacement of organic HAP vapor-laden air can occur due to filling of containers, temperature or barometric pressure changes, or due to agitation during mixing.

Organic HAP. Available emission data collected during the development of the proposed NESHAP show that the primary organic HAP emitted from the surface coating of metal furniture include xylene, toluene, glycol ethers, 2-butoxy ethanol, ethylbenzene, and methyl ethyl ketone. These compounds account for over 90 percent of this category’s nationwide organic HAP emissions. Other significant organic HAP identified include methyl isobutyl ketone, hexane, and methylene chloride.

Inorganic HAP. Based on information reported in survey responses during the development of the proposed NESHAP, inorganic HAP, including chromium, lead, and manganese compounds are contained in two kinds of coatings used by this source category. No inorganic HAP were reported in cleaning materials. Nationwide inorganic HAP emissions are estimated to be less than 5 megagrams per year (Mg/yr).

D. What Is the Affected Source?

We define an affected source as a stationary source, group of stationary sources, or part of a stationary source to which a specific emission standard applies. This proposed rule defines the affected source as the collection of all operations associated with the surface coating of metal furniture or components of metal furniture that are performed at a contiguous area under common control. These operations include preparation of a coating for application (e.g., mixing with thinners); surface preparation of the metal furniture or component; coating application and flash-off; drying and/or curing of applied coatings; cleaning of equipment used in surface coating; storage of coatings, thinners, and cleaning materials; and handling and conveyance of waste materials from the surface coating operations. Coatings include such materials as adhesives and protective or decorative coatings.

E. What Are the Proposed Emission Limits, Operating Limits, and Other Standards?

We are proposing standards that, if promulgated, would limit HAP emissions from the surface coating of metal furniture. The proposed standards include emission limits and operating limits.

Emission Limits. We are proposing to limit organic HAP emissions from each new and reconstructed affected source to no more than 0.094 kilogram HAP per liter of coating solids used (kg/liter) (0.78 pound per gallon (lb/gal)) each calendar month. The proposed limit for each existing affected source is 0.12 kg HAP/liter used (1.0 lb/gal). You would choose from several compliance options in the proposed rule to achieve the emission limit(s). You could comply by applying materials (coatings, thinners, and cleaning materials) that meet the emission limit, either individually or collectively, during each monthly compliance period. You could also use a capture system and add-on control device to meet the emission limit, or a combination of both approaches.

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 monthly 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, you would establish average volumetric flow rate limits for each capture device (or enclosure) in each capture system. You would also establish limits on average pressure drop across openings in the capture system.

For thermal and catalytic oxidizers, you would monitor temperature. For solvent recovery systems for which you do not conduct a monthly 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 temperature of the outlet gas temperature from the condenser.

All operating limits must reflect operation of the capture system and control devices during a performance test that demonstrates achievement of the emission limit during representative operating conditions.

General Provisions. The General Provisions (40 CFR part 63, subpart A) also would apply to you as outlined 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 you should be aware of. However, unless specifically overridden in the proposed rule, all of the applicable General Provisions requirements would apply to you.

F. What Are the Proposed Testing and Initial Compliance Requirements?

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

The proposed initial compliance period is 1 month and begins on the compliance date and ends on the last day of the first full calendar month following the compliance date; except that for new and reconstructed sources required to conduct performance tests, it ends on the last day of the first full calendar month following the performance test. Being ''in compliance'' means that the owner or operator of the affected source meets all the requirements of the rule to achieve the proposed emission limit(s) and operating limits by the end of 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 for that period. If it does not meet the applicable limit(s), then it is out of compliance for the entire initial compliance period.

Emission Limit(s). There are several proposed options for complying with the proposed emission limit(s), and the testing and initial compliance requirements vary accordingly.

If you demonstrate compliance based on the materials used in the affected source, you would determine the mass of organic HAP and the volume of solids in all materials used during the initial compliance period.

To determine the mass of organic HAP in coatings, thinners, and cleaning materials and the volume coating solids, you could either rely on manufacturer's data or on results from the test methods listed below. Under § 63.4941 of the proposed rule, you would be required to determine the mass of organic HAP in coatings, thinners, and cleaning materials. To do this, you would count HAP that are present at 1 percent by mass or more if they are not carcinogens identified by the Occupational Safety and Health Administration (OSHA) at 29 CFR 1910.1200(d)(4), and count HAP that are present at 0.1 percent by mass or more if they are OSHA-identified carcinogens. Coating and solvent manufacturers are accustomed to providing a breakdown of material components according to this distinction and routinely report the values on Material Safety Data Sheets for the materials, as required by OSHA. We could have selected some other way to count HAP components of materials but concluded that allowing this long-standing approach to be used for compliance with the proposed NESHAP would provide the information needed for compliance assurance and would not impose any additional burden on the industry. We request comment on the appropriateness of this provision of the proposed rule.

You may use alternative test methods provided you get EPA approval in accordance with the NESHAP General Provisions, § 63.7(f). 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 organic HAP content, use Method 311 of 40 CFR part 63, appendix A;
- The proposed rule allows you to use nonaqueous volatile matter as a surrogate for organic HAP, which would include all organic HAP plus all other organic compounds. If you choose this option, then use Method 24 of 40 CFR part 60, appendix A; and
- For volume coating solids, use either manufacturer's data or ASTM Method D2697–86 (1998) or ASTM Method D6093–97.

To demonstrate initial compliance based on the materials used, you would be required to either ensure that the organic HAP content of each coating meets the emission limit and that you use no organic HAP-containing thinners or cleaning materials; or ensure that the total mass of organic HAP in all coatings, thinners, and cleaning materials divided by the total volume of coating solids meets the emission limit. For the latter option, you would be required to:

- For the initial compliance period, determine the quantity of each coating, thinner, and cleaning material used in the affected source.
- Determine the mass of organic HAP in each coating, thinner, and cleaning material.
- Determine the volume fraction solids for each coating.
- Calculate the total mass of organic HAP for materials and total volume of coating solids used in the affected source for the compliance period. 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 (TSDF) regulated under 40 CFR part 262, 264, 265, or 266. The proposed calculation equation (Equation 1 in § 63.4951) adds together all the organic HAP in the coatings, thinners, and cleaning materials and allows you to subtract organic HAP in waste materials as indicated above. The calculated mass of organic HAP is, therefore, not based on actual measurement of emissions to the atmosphere but rather assumes that all organic HAP used (less those in waste materials as appropriate) are emitted. This means of determining organic HAP emissions for compliance is consistent with the means by which we calculated emission rates from industry data on which the proposed emission limits are based. We believe that Equation 1 is a simple mass-balance relationship which adequately quantifies the organic HAP emissions without imposing an excessive burden on respondents. We request comment on our approach for determining emissions and on any alternatives.
- Calculate the ratio of the total mass of organic HAP for the materials used to the total volume of coating solids used.
- Record the calculations and results and include them in your notification of compliance status (see section II.H of this preamble).

If you use a capture system and control device, other than a solvent recovery system for which you conduct a monthly liquid-liquid material balance, you would:

- Conduct an initial performance test to determine the capture and control efficiencies of the equipment (described below) and to establish operating limits to be achieved on a continuous basis (also described below). The performance test would have to be completed no later than the compliance date for existing sources and 180 days after the compliance date for new and reconstructed sources. You would also need to schedule it in time to obtain the results for use in completing your compliance determination for the initial compliance period.

- Determine the mass of organic HAP in each material and the volume fraction coating solids for each coating used during the initial compliance period.
- Calculate the organic HAP emissions from all 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 from uncontrolled coating operations.
- Calculate the ratio of the total mass of HAP emissions from both controlled and uncontrolled coating operations to the total volume of coating solids used during the initial compliance period.
- Record the calculations and results and include them in your Notification of Compliance Status.

The capture and control efficiency for a capture and control system, other than a solvent recovery system for which you conduct monthly liquid-liquid material balances, would be demonstrated based on emission capture and reduction efficiency. To determine the capture efficiency, you would either verify the presence of a permanent total enclosure 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 three protocols in § 63.4965 to measure capture efficiency. If you have a permanent total enclosure and all 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 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. In lieu of Method 25 or 25A, you may use Method 18 if you know the HAP constituents in the inlet and outlet gas streams and you quantify at least 90 percent of the organic compounds in the gas stream. 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 affected source during the initial compliance period and determine the total volatile matter contained in these materials. You would also measure the amount of volatile matter recovered by the solvent recovery system during the compliance period. Then you would compare the amount recovered to the amount used to determine the overall control efficiency, and apply this efficiency to the organic HAP to solids ratio for the materials used. You would record the calculations and results and include them in your Notification of Compliance Status.

Operating Limits. In accordance with section 114(a) of the CAA, the proposed operating limits would require the use of continuous parameter monitoring systems (CPMS) to ensure that sources are in compliance. The monitoring must be capable of detecting deviations with sufficient representativeness, accuracy, precision, reliability, frequency, and timeliness to determine if compliance is continuous during a reporting period.

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 limit. If you operate your capture system and control device at different sets of representative operating conditions, you must establish operating limits for the parameters for each different operating condition.

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 manufacturer's specifications and ensure that the CPMS meet the requirements in § 63.4968 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 the EPA and is not delegated to States. We request comment on whether there are alternative means of monitoring performance for add-on controls which would be appropriate. Commenters should address the relative effectiveness and cost of alternatives.

If you use a thermal or catalytic oxidizer, you would continuously monitor temperature and record it at least every 15 minutes. For thermal oxidizers, 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 during each 3-hour period the average temperature would have to be at or above this limit. For catalytic oxidizers, temperature monitors are placed immediately before and after the catalyst bed. The operating limits would be the average combustion temperature just 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 combustion temperature and the average temperature difference would have to be at or above these limits.

If you use a solvent recovery system, and do not conduct liquid-liquid material balances to demonstrate compliance, then 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 3-hour period the average temperature would have to be at or below this limit.

For each capture system, you would establish operating limits for gas volumetric flow rate and pressure drop across an opening in each enclosure or capture device. The operating limit would be the average volumetric flow rate and average pressure drop across the opening during the performance test, to be met as a minimum.

We request comment on the proposed testing and initial compliance requirements discussed above.

G. What Are the Proposed Continuous Compliance Provisions?

Emission Limit(s)

If you demonstrate compliance with the proposed emission limit(s) based on the materials used in the affected source, you would ensure, for each monthly compliance period, that the ratio of organic HAP to coating solids meets the emission limit. You would follow the same procedures as you would for the initial compliance period, as described in section II.F of this preamble.

For each coating operation on which you use a capture system and control device, other than solvent recovery for which you conduct a monthly liquid-liquid material balance, you would use the continuous parameter monitoring results for the month in determining the mass of organic HAP emissions. If the monitoring results indicate no deviations from the operating limits and there were no bypasses of the control device, then you would assume the capture system and control device is achieving the same percent emission reduction efficiency as it did during the performance test. 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 emission rate 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 emission rate by assuming the capture system and control device were achieving zero emission reduction during the periods of deviation.

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 applied 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.

The monthly emission rate for your affected source would be the total mass of organic HAP emissions from all controlled and uncontrolled coating operations divided by the total volume of coating solids used during the compliance period.

Operating Limits. If you use a 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 described in section II.F of this preamble. If the continuous monitoring shows that the capture system and control device is operating outside the range of values established during the performance test, then you have deviated from the established operating limits.

If you operate a capture system and control device that allows emissions to bypass the control device, you would have to demonstrate that HAP emissions from each emission point within the affected source 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:

(1) Flow control position indicator to provide a record of whether the exhaust stream is directed to the control device;

(2) Car-seal or lock-and-key valve closures to secure the bypass line valve in the closed position when the control device is operating;

(3) Valve closure continuous monitoring to ensure any bypass line valve or damper is closed when the control device is operating; or

(4) 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, then you have deviated from the emission limit.

Operations During Startup, Shutdown, and Malfunction. 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 during periods of startup, shutdown, and malfunction of the capture system and control device.

Emissions Reductions Plan for Mixing, Storage, and Waste Handling. If you use a capture system and control device for compliance, you would be required to develop and operate according to a plan for reducing emissions from mixing operations, storage tanks or other containers, and waste handling operations. This plan would include a description of all steps taken to minimize emissions from these sources (e.g., using closed storage containers, practices to minimize emissions during filling and transfer of contents from containers, using spill minimization techniques, placing solvent-laden cloth in closed containers immediately after use, etc.). If you do not develop a plan or you do not implement the plan, this would be a deviation from the work practice standard.

We request comment on the proposed continuous compliance requirements discussed above.

H. What Are the Proposed 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 the proposed rule. The General Provisions notification requirements include: (1) Initial notifications, (2) notification of performance test if you are complying using a capture system and control device, (3) notification of compliance status, and (4) 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 would be required to send a notification to the EPA Regional Office in the region where your facility is located and to your State agency at least 1 year before the compliance date for existing sources and within 120 days after the date of initial startup for new and reconstructed sources, or 120 days after publication of the final rule, whichever is later. This report notifies us and your State agency that you have an existing facility that is subject to the proposed standard or that you have constructed a new facility. Thus, it allows you and the permitting authority to plan for compliance activities. You would also need to send a notification of planned construction or reconstruction of a source that would be subject to the 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 monthly liquid-liquid material balance, you would be required to conduct a performance test, as described in section II.F of this preamble, no later than the compliance date for your affected source. You would be required to notify your EPA Regional Office (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. Your compliance procedures would depend on which compliance option you choose. For each compliance option, you would send us a

Notification of Compliance Status within 30 days after the end of the initial compliance period described in section II.F of this preamble. In the notification, you would certify whether the affected source has complied with the standards, identify the option you used to demonstrate initial compliance, summarize the data and calculations supporting the compliance demonstration, and describe how you will determine continuous compliance.

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 achieved 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 would be required to be kept on-site; the other 3 years' records could be kept off-site. Records pertaining to the design and operation of the control and monitoring equipment would have to be kept for the life of the equipment.

Depending on the compliance option that you choose, you could need to keep records of the following:

- Organic HAP content, volatile matter content, solids content, and quantity of the coatings, thinners, and cleaning materials used during each compliance period;
- All documentation supporting initial notifications and notifications of compliance status.

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

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

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 limit, operating limit, or work practice standard.

Deviations, as determined from these records, would need to be recorded and also reported, as described in section II.H of this preamble. A deviation is any instance when any requirement or obligation established by the proposed rule including, but not limited to, the emission limit(s), operating limits, and work practice standards, is not met.

If you use a capture system and control device to reduce HAP emissions, you would have to make your startup, shutdown, and malfunction plan available for inspection if the Administrator requests to see it. It would stay in your records for the life of the affected source or until the source is no longer subject to the 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 document them in the report as follows:

- Report each deviation from the monthly emission limit.
- If you are complying by using a thermal oxidizer, report all times when a 3-hour average temperature is below the operating limit.
- If you are complying by using a catalytic oxidizer, report all times when a 3-hour average temperature difference across the catalyst bed is below the operating limit, and when a 3-hour average combustion temperature before the catalyst bed is below the operating limit.
- If you are complying by using oxidizers, or solvent recovery systems where liquid-liquid material balances are not conducted, report all times when the value of the site-specific operating parameter used to monitor the capture system performance was less than the operating limit established for the capture system.
- If you are complying by using a carbon adsorber for which you do not conduct liquid-liquid material balances, report all times when the steam or nitrogen flow is less than, and/or the carbon bed temperature is more than, the operating limits.
- If you are complying by using a condenser, report all times when a 3-hour average outlet temperature is higher than the operating limit.
- If your capture system contains bypass lines that could divert emissions from the control device to the atmosphere, report all times when emissions were not routed to the control device.
- Report other specific information on the periods of time the deviations occurred.

You would also have to include an explanation in each semiannual report if a change occurs that might affect the compliance status of the affected source or you change to another option for meeting the emission limit.

Other Reports. You would be required to submit reports for periods of startup, shutdown, and 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 the immediate reports required by § 63.10(d)(5)(ii).

We request comment on the proposed notification, recordkeeping, and reporting requirements discussed above.

III. Rationale for Selecting the Proposed Standards

A. How Did We Select the Source Category?

The surface coating of metal furniture is a source category that is on the list of source categories to be regulated because it contains major sources which emit or have the potential to emit, considering controls, at least 10 tons of any one HAP or at least 25 tons of any combination of HAP annually. The proposed rule would control HAP emissions from both new and existing major sources. Area sources are not being regulated under this proposed rule.

The surface coating of metal furniture as described in the listing includes any facility engaged in the surface coating and manufacture or repair of metal furniture parts or products (including, but not limited to, chairs, tables, cabinets, and bookcases). We use the metal furniture product lists contained in the SIC and NAICS code descriptions to describe the vast array of metal furniture parts and products.

We intend the source category to include facilities for which the surface coating of metal furniture is either their principal activity or is an integral part of a production process which is the principal activity. Most coating operations are located at plant sites that are dedicated to these activities. However, some may be located at 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 process and applicable emission control techniques, are included in the source category.

The source category does not include research or laboratory facilities or janitorial, building, and facility maintenance operations.

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 operation, 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. The data available to us indicate that there are not significant differences across the source category in the substrates coated, the coating technologies used, the range of HAP content in the coatings and materials used, or the applicability of control measures used. Based on this information, we believe that subcategories are not warranted for the metal furniture surface coating source category. We specifically request comment on this view and ask that commenters provide data, information, and rationale to support their position.

B. How Did We Select the Regulated Pollutants?

Organic HAP. Available emission data collected during the development of the proposed NESHAP show that the primary organic HAP emitted from the surface coating of metal furniture include xylene, toluene, glycol ethers, 2-butoxy ethanol, ethylbenzene, and methyl ethyl ketone. These compounds account for about 90 percent of this category's nationwide organic HAP emissions. However, many other organic HAP are used, or can be used, in metal furniture coatings, thinners, and cleaning materials. Therefore, the proposed rule would regulate emissions of all organic HAP.

Inorganic HAP. Based on information reported in response to surveys during the development of the proposed NESHAP, most of the coatings used in this source category do not contain inorganic HAP. Approximately 680 coatings were reported in the survey responses from the metal furniture industry, and only 2 coatings are reported as containing inorganic HAP such as chromium, lead, or manganese compounds. These 2 coatings represent less than 0.5 percent of the total volume of coatings reported in the survey responses. The facilities in this source category using coatings with inorganic HAP employ either a waterwash system or dry particulate filters that reduce inorganic HAP emissions from the spray booth exhaust. 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 being regulated. The affected source also serves to distinguish 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 an emission standard is based on a collection of emissions sources, or total facility emissions, we select an affected source based on that same collection of emission sources, or the total facility, as well. This approach for defining the affected source broadly is particularly appropriate for industries where a plantwide emission standard provides 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.

Selection of the Affected Source. The affected source for these proposed standards is broadly defined to include all operations associated with the coating and cleaning of metal furniture and cleaning of equipment. These operations include storage and mixing of coatings and other materials; surface preparation of the metal furniture prior to coating application; coating application and flash-off, drying and curing of applied coatings; cleaning operations; and waste handling operations.

In selecting the affected source, we considered, for each operation, the extent to which HAP-containing materials are used and the level of HAP that are emitted. Cleaning and coating application, flash-off, and curing/drying operations account for the majority of HAP emissions at metal furniture surface coating operations, and most of the industry's emission reduction efforts have been focused on these areas. Thus, we included these operations in the affected source.

We were not able to obtain data to adequately quantify HAP emissions from storage, mixing, and waste handling. However, solvents that are added to coatings as thinners, and other HAP-containing additives to coatings, may be emitted during mixing and storage. The level of emissions would depend on the type of mixing equipment, the type of storage container, and the work practices adopted at the facility. Emissions from waste handling operations depend on the type of system used to collect and transport organic HAP-containing waste coatings, thinners, and cleaning materials in the facility. For example, solvent-laden rags that are used to clean spray booths or tanks could be a source of HAP emissions. The method used to isolate and store such rags would affect the level of emissions to ambient air. Mixing, storage, and waste handling operations are included in the affected source.

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 HAP-containing materials, each facility can select among available coatings, thinners, and cleaning materials to comply with the proposed limits.

Additional information on the metal furniture 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 Existing and New Sources?

The sections below present the rationale for determining the MACT floor, regulatory alternatives beyond the floor, and selection of the proposed standards for existing and new affected sources.

How did we determine the MACT floor technology? After we identify the specific source categories or subcategories of sources to regulate under section 112, we must develop emission standards for each category or subcategory. Section 112 establishes a minimum baseline or ''floor'' for standards. For new sources in a category or subcategory, the standards cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source (section 112(d)(3)). The standards for existing sources can be less stringent than standards for new 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 5 sources for categories or subcategories with fewer than 30 sources).

Within the metal furniture industry, organic HAP emission control for cleaning and surface coating operations is accomplished primarily through the use of lower-HAP coatings, thinners, and cleaning materials. Add-on capture and control systems for organic HAP are rarely used by the industry. While lower organic HAP materials are broadly used throughout the industry, each particular coating technology is not used at every facility. Rather, facilities use various combinations of low-HAP coatings, thinners, and cleaning materials. Thus, the most reasonable approach to establishing a MACT floor appeared to be 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 emissions by the volume of coating solids used. We believe coating solids usage is an appropriate indicator of overall production level.

We used information obtained from industry survey responses to estimate the sourcewide organic HAP emissions. We calculated total organic HAP emissions by assuming that 100 percent of the volatile components in all coatings (including adhesives), thinners, and cleaning materials (including surface preparation materials) are emitted.

The survey response information was also used to determine the total volume of coating solids used. We included protective and functional coatings, as well as adhesives, in this total.

Using the sourcewide organic HAP emissions and the total volume of coating solids used. We calculated the normalized organic HAP emission rate in units of kilograms organic HAP per liter of coating solids used. The facilities were then ranked from the lowest emission rate to the highest. We based this analysis on a total of 49 facilities reporting over 9 million liters usage of approximately 680 coatings and adhesives, as well as 730,000 liters of cleaning materials.

A detailed description of the determination of the MACT floor is provided in a memo (the MACT floor memo) in the docket for the proposed rule. The description includes all the assumptions and it documents the methodology that was used. (See **ADDRESSES** section of this preamble for information on the docket). We specifically request comment on the methodology used to determine the MACT floor, as summarized below.

The MACT floor for existing sources was determined by the arithmetic mean of the HAP emission rates of the top 12 percent of 49 facilities, which were the top 6 facilities. This mean value was 0.12 kg organic HAP/liter of coating solids used (1.0 lb/gal) and represents the existing source MACT floor for organic HAP. The survey data showed no appreciable differences between the floor facilities and the remaining facilities in the database in the substrates coated, the coating technologies used, or the applicability of control measures across the various operations.

Using the list of facilities ranked by emission rates, we observed that the best controlled source emitted 0.094 kg organic HAP/liter of coating solids used (0.78 lb/gal). Before establishing this level of emissions as the new source MACT floor, we evaluated the metal furniture surface coating operations at this source to determine if the coating technology (in terms of the coating type and application method) used was transferable throughout the industry. We also determined whether the product type produced at this source affected the emissions such that the source may not be similar to all other sources in the category. For example, a source that coats only interior parts could have significantly different requirements and coating choices than a source that had the visual and quality requirements associated with coating parts for the exterior of the product. We also determined that the emission limit represented by the lowest-emitting source could be achieved through the use of add-on control devices for those facilities electing to use higher organic HAP coatings, thinners, and cleaning materials.

The best-controlled source produces products (metal storage cabinets, lockers, and racks) that are not unusual for the industry. The source spray applies solvent-based coatings, and all cleaning materials used for surface preparation prior to coating are free of organic HAP. Coating application equipment is cleaned with solvents containing organic HAP. Thus, the source is employing technologies that are already in widespread use throughout the metal furniture coating industry. We believe that this source is similar to other sources in the category and represents the best-controlled source in our database.

We recognize that some sources may have limited choices in the coatings available for their particular application. As a result, lower-HAP coatings may not be available to meet the needs of every source. However, if the source is also using cleaning materials that contain organic HAP, then it may be able to meet the emission limit by reformulating these cleaning materials. A source also would have the option of using capture systems and control devices to reduce emissions although we believe choice of this option is not likely for most sources.

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

We identified three regulatory alternatives more stringent than the MACT floor level of control for organic HAP. These alternatives were (1) conversion to powder coatings; (2) conversion to liquid coatings that have a very low, or no, organic HAP content; and (3) use of add-on capture systems and control devices.

Information indicates that several metal furniture surface coating facilities have converted to using only powder coatings. Such facilities typically produce a single type of product (such as warehouse shelving units), do not require unusual finishes, and use a small number of colors. Many metal furniture surface coating facilities, however, manufacture more than one product and often use a wide array of colors. Many also achieve finish types that cannot be duplicated with powder coatings.

Powder coating may not produce the varied surface finishes and colors available from liquid coatings. Although powder coatings may be somewhat more durable than conventional liquid coatings, specialty finishes such as antique and crackle, as well as the palette of designer colors offered by some manufacturers, may not be adequately duplicated by powder coatings. Consequently, while powder coating is a proven technology that can be used in many situations, we do not believe it is appropriate to require the use of powder coatings for all segments of the metal furniture industry and have not included them in our proposal as a beyond-the-floor option.

Lower organic HAP liquid coatings fall into two primary categories. The most common are coatings formulated with solvents that are not organic HAP (but may be VOC). The second category are those coatings that result from alternate technologies such as Ultraviolet (UV)-curable coatings and autophoretic coatings. The UV-curable coatings may or may not include organic solvents, which may contain HAP or VOC, to keep the pigment and other components of the coating in solution until curing. Autophoretic coatings use no organic HAP and only small amounts of VOC, but they may contain inorganic HAP. These coatings are applied using a dip application method where a chemical reaction deposits the coating on the surface of the part.

These lower organic HAP coatings are currently in production use but their applicability is limited for this industry. The selection of lower organic HAP coatings is limited and is not extensive enough to broadly meet the needs of all segments of the metal furniture industry. Given the limited applicability of UV-curable and autophoretic coating technologies, we do not believe it is feasible to require the use of these coating technologies and have not included them in our proposal as a beyond-the-floor option for organic HAP.

It is technically feasible to achieve organic HAP emission rates lower than the MACT floor levels through the use of emission capture systems and control devices. For example, the use of a permanent total enclosure and an oxidizer could further reduce organic HAP emissions from typical sources by about 4.2 Mg (4.6 tons) to 31 Mg (34 tons) per year. However, the cost of such a system could be approximately $1 million. We believe that the additional emission reduction would not justify the additional cost. Therefore, we have not included the use of emission capture and control systems in our proposal as a beyond-the-floor option.

How did we select the standards? For existing sources, we based the standards on the existing source MACT floor. As described earlier, we believe that beyond-the-floor options are not technically or economically feasible for all existing sources. For the same reasons, we are basing the proposed standards for new sources on the new source MACT floor.

Without having information on the benefits that would be achieved by further reducing emissions beyond the floor, we believe that the additional emission reductions that could be achieved do not warrant the costs that each source could incur. Therefore, we would not require beyond-the-floor levels of emission reductions in this proposed rule. After implementation of a final MACT rule for this category, we will evaluate the health and environmental risks that may be posed as a result of exposure to emissions from the metal furniture surface coating source category, as required by section 112(f) of the CAA. At that time, we will evaluate whether additional controls are warranted in light of the available risk information. We specifically request comment on our proposal not to base the CAA section 112(d) standards on a beyond-the-floor option. A beyond-the-floor option could apply to all segments of the metal furniture surface coating source category or to only certain segments. Comments supporting our proposed decision not to go beyond the floor as well as comments opposing the decision should include data, information, and rationale supporting the position of the commenter.

We note here that our assumption, 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 waste organic HAP-containing materials to a facility for treatment or disposal. We made this 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, believe that this practice is not common within the metal furniture industry. We recognize, however, that some metal furniture facilities may conduct such activities and should be allowed to account for such activities in determining their emissions. Thus, the proposed regulation would allow you to reduce the affected sourcewide 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 Standards?

Numerical emission standards are required by section 112 of the CAA unless we determine that it is not feasible to prescribe or enforce an emission standard, in which case a design, equipment, work practice, or operational standard can be set (section 112(h) of the CAA). The formats considered for the proposed standards and the considerations in selection of the format are discussed below.

We selected as the format of the proposed standards for organic HAP, mass of organic HAP per volume of coating solids used. The performance-based nature of this proposed format would allow metal furniture coating operation owners and operators flexibility in choosing any combination of means (including coating reformulation, use of lower-HAP or non-HAP materials, solvent elimination, work practices, and add-on control devices) to comply with the 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 could not normalize by surface area due to lack of information. We selected the volume of coating solids used because it is directly related to the surface area coated (i.e., the average dry film thickness of coatings on most metal furniture products is generally consistent) 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 rejected, included a usage limit (mass per unit time) and a never-to-be-exceeded limit on the organic HAP content of coatings and cleaning materials. As it is not our intent to limit a facility's production under these proposed standards, we have not proposed a usage limit. We also chose not to propose a never-to-be-exceeded limit because the availability of all the different kinds of coatings required by the metal furniture industry at or below such a limit does not appear to be sufficient to meet the needs of all segments of the industry.

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

The proposed standards would allow you to choose among several methods to demonstrate compliance with the proposed standards for organic HAP: (1) Coatings with low or no organic HAP; (2) an overall organic HAP emission rate from all coatings, thinners, and cleaning materials that is less than the applicable emission limit; or (3) capture systems and control devices.

Coatings with Low or No Organic HAP. 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 each 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 past standards, VOC emission control measures have been implemented in the coatings industry, 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 requirements for determining volume coating solids would allow you to choose between using manufacturer's data or measuring the volume with either ASTM Method D2697–86 (1998) or ASTM Method D6093–97.

Overall Organic HAP Emission Rate. To demonstrate compliance using this option, you would calculate the organic HAP emission rate for your affected source, based on the mass of organic HAP in all coatings, thinners, and cleaners and the volume of coating solids used during the compliance period, and demonstrate that it does not exceed the applicable emission limit. You would document these values using the methods discussed previously.

Capture Systems and Control Devices. If you use a capture system and control device, other than a solvent recovery device for which you conduct a monthly 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 in the affected source 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 and other materials used in the affected source to derive the monthly HAP emission rate in kg HAP/liter of coating solids used. 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 (described in section II.F of this preamble) have been required under 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 Continuous Compliance Requirements?

To ensure continuous compliance with the proposed organic HAP emission limit(s) and/or 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 limit(s) and/or 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 limit(s) 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 consecutive 3-hour average values for most monitored parameters for the affected source. We selected this averaging period to ensure the control system is continuously operating at conditions that are the same or better than those recorded during a performance test demonstrating compliance with the emission limit(s).

To demonstrate continuous compliance with the monthly emission limit(s), you would also need records of the quantity of coatings and other materials used and the data and calculations supporting your determination of their HAP content. If you conduct monthly liquid-liquid material balances, you would need records of the quantity of volatile matter used in the affected source and the quantity recovered by the solvent recovery system each month.

H. How Did We Select the 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 2 of the proposed subpart RRRR. 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.

I. How Did We Select the Compliance Date?

You would be allowed 3 years to comply with the final standards for existing affected sources. This is the maximum period allowed by the CAA. We believe that 3 years for compliance is necessary to allow adequate time to accommodate the variety of compliance methods that existing sources may use. Most sources in this category would need this 3-year maximum amount of time to develop and test reformulated coatings, particularly those who may opt to comply using a different lower-emitting coating technology. We want to encourage the use of these pollution prevention technologies. In addition, time would be needed to establish records management systems required for enforcement purposes. Sources that choose to use emission capture and control systems may need this time to purchase and install them and to obtain a permit for the use of add-on controls.

The CAA requires that new or reconstructed affected sources comply with standards immediately upon startup or the effective date of the final rule, whichever is later.

IV. Summary of Environmental, Energy, and Economic Impacts

Model plants were developed to aid in the estimation of the impacts the MACT floor level of control would have on the metal furniture industry. Three model plants distinguished by size, as measured by the total volume of coating solids used, were developed. Impacts were then developed for each model plant, and these individual impacts were scaled to nationwide levels based on the number of facilities corresponding to each model plant size. We used the model plant approach because we did not have adequate data to determine impacts for each actual facility.

A variety of compliance methods are available to the industry to meet the proposed emission limit(s). We analyzed the information obtained from the industry survey responses, industry site visits, trade groups, and industry representatives to determine which compliance methods would most likely be used by existing and new sources. We expect that the most widely-used method would be low-HAP content liquid coatings (coatings with HAP contents at or below the emission limits) and lower-HAP cleaning materials. Powder coatings and add-on capture and control systems would likely be used to a lesser extent. Various combinations of these methods may be used. For the purpose of assessing impacts, we assumed that all existing sources would convert to lower-HAP content liquid coatings, thinners, and cleaning materials. We assumed that new sources would also use lower-HAP materials.

We first estimated the impacts of the proposed emission limits on the three model plants. To scale up the model plant impacts to nationwide levels, we multiplied the individual model plant impacts by the estimated number of major sources in the United States corresponding to each model plant size. We used United States Census Bureau data as the basis for this estimate, which was a total of 655 facilities. For more information on how impacts were estimated, see Chapters 7 and 8 of the background information document, EPA–453/R–01–010.

A. What Are the Air Impacts?

For existing major sources, we estimated that compliance with the proposed emission limits would result in a reduction of nationwide organic HAP emissions of 13,900 Mg/yr (15,274 tpy). This represents a reduction of approximately 70 percent from the baseline organic HAP emissions of 20,300 Mg/yr (22,308 tpy).

The estimated baseline organic HAP emissions for new sources (20 over the first 5 years after promulgation of the final rule) would be approximately 635 Mg (698 tons) in the fifth year. Emissions from new sources would be reduced by approximately 465 Mg (511 tons) in the fifth year as a result of the proposed standards (73 percent reduction).

B. What Are the Cost Impacts?

An affected source may incur three types of costs to comply with the proposed standards: capital, direct, and indirect. Capital costs represent the one-time purchase of equipment. We have included coatings, thinners, and cleaning materials as direct costs incurred on a continuing basis for materials consumed in the manufacturing process. The cost of utilities, where applicable, is also included in the direct costs. Indirect costs typically include overhead, taxes, insurance, and administrative costs, as well as capital recovery costs.

Existing sources. To comply with the proposed emission limits, we estimated that existing facilities would likely use reformulated coatings, thinners, and cleaning materials. No capital costs have been attributed to these compliance methods. We estimated full costs for 517 facilities. Approximately 60 facilities would have only recordkeeping and reporting costs because these facilities would already be in compliance with the proposed standards (based on survey responses). Facilities that would achieve area source status before the compliance date of the final standards will only incur costs of reading the rule. In addition to the direct costs, all affected sources would incur some recordkeeping and reporting costs.

We estimated no incremental costs associated with the use of lower-HAP coatings and thinners. Only the incremental cost of organic HAP-free cleaning materials over organic HAP cleaning materials was counted. The average annual cost for each facility incurring full costs is approximately $26,574. This value includes monitoring, recordkeeping, and reporting costs.

We estimated total nationwide annual costs in the fifth year to comply with the proposed emission limits to be $14.8 million for existing sources. These costs include $4.66 million direct costs associated with material usage and $10.1 million for recordkeeping and reporting.

New Sources. We estimated the number of new major sources based on information from industry trade groups. Starting with the anticipated annual sales growth for the industry, excluding price increases and inflation, we determined the amount of coating capacity that would be needed to meet the predicted increase in demand. Based on information provided by industry representatives, we assumed that 75 percent of this coating capacity could be absorbed by excess capacity at existing facilities. The remaining 25 percent increase in capacity was estimated to be met by the construction of four new facilities per year for the first 5 years after promulgation of the final standards.

Based on available information, we determined which compliance methods will most likely be used by new sources and, therefore, which compliance methods to use to estimate the cost impacts. We determined that new sources would choose reformulated lower organic HAP content materials to meet the new source emission limit.

For the 20 new facilities anticipated over the 5-year period after promulgation of the final standards, annual costs in the fifth year are estimated to be $0.6 million. We estimated no incremental costs associated with use of lower-HAP coatings and thinners. Only the incremental cost of organic HAP-free cleaning materials over organic HAP cleaning materials was counted. There are no anticipated capital costs.

C. What Are the Economic Impacts?

We performed an economic impact analysis (EIA) to provide an estimate of the facility and market impacts of the proposed standards as well as its social costs. In general, we expect the economic impacts of the proposed standards to be minimal, with price increases and production decreases of less than 0.1 percent. Given the negligible market impacts of this proposed rule, the social costs are expected to be roughly the same as the estimated engineering compliance costs of $14.8 million for existing sources.

For affected facilities, the distribution of costs is slanted toward the lower impact levels with many facilities incurring only those related to recordkeeping and reporting. The EIA indicates that these regulatory costs are expected to represent only 0.1 percent of the value of product shipments, which should not cause producers to cease or alter their current operations. Hence, no firms or facilities are expected to become at risk of closure because of the proposed standards. International trade impacts would only occur for the metal household furniture segment of the industry, but the small price increase (i.e., 0.04 percent) on this segment indicates negligible impacts, if any. Based on the projected characteristics and costs for new sources, EPA does not expect any differential impacts on these sources. For more information, refer to the ''Economic Impact Analysis of the Proposed NESHAP: Surface Coating of Metal Furniture'' (Docket No. A–97–40).

D. What are the Nonair Health, Environmental, and Energy Impacts?

Based on information from the industry survey responses, there was no indication that the use of low organic HAP content coatings, thinners, and cleaning materials would result in any increase or decrease in nonair health, environmental, and energy impacts. There would be no change in the 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, we estimate that there would be no significant change in the amount of materials used or the amount of waste produced and there would be no additional energy requirements for affected sources.

V. Administrative Requirements

A. Executive Order 12866, Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the 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 the action to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the docket (see **ADDRESSES** section of this preamble).

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.

This 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 this 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 this 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.''

This 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 metal furniture surface coating facilities. Thus, Executive Order 13175 does not apply to this rule.

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

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

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. This proposed rule is not subject to Executive Order 13045 because it is based on technology performance and not on 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, this 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

This 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 this 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, the EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures by State, local, and tribal governments, in the aggregate, or by 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 the EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least-costly, most cost-effective, or least-burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows the EPA to adopt an alternative other than the least-costly, most cost-effective, or least-burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before the EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of 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 this 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 the private sector in any 1 year. The maximum total annual cost of this rule for any year has been estimated to be less than $15.4 million. Thus, today's proposed rule is not subject to the requirements of sections 202 and 205 of the UMRA. In addition, the EPA has determined that this proposed rule contains no regulatory requirements that might significantly or uniquely affect small governments. This rule contains requirements that may apply to State governments' correctional institutions that manufacture or repair metal furniture. However, these requirements do not uniquely or significantly affect those institutions. 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 an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedures 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 standards on small entities, small entity is defined as: (1) A small business ranging from 100–1,000 employees or less than $5 million in annual sales (see Table 2); (2) a small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

TABLE 2.—SMALL BUSINESS ADMINISTRATION (SBA) SMALL BUSINESS SIZE STANDARDS FOR COMPANIES OWNING FACILITIES IN THE METAL FURNITURE SOURCE CATEGORY BY NAICS CODES [a, b]

1997 NAICS code	Product description	SBA size standard (employees)
421610	Electrical Apparatus and Equipment, Wiring Supplies, and Construction Material Wholesalers.	100
337124	Metal Household Furniture Manufacturing	500
337214	Nonwood Office Furniture Manufacturing	500
336360	Motor Vehicle Fabric Accessories and Seat Manufacturing	500
337127	Institutional Furniture Manufacturing	500
337215	Showcase, Partition, Shelving, and Locker Manufacturing	500
332951	Hardware Manufacturing	500
332116	Metal Stamping	500
332612	Wire Spring Manufacturing	500
337215	Showcase, Partition, Shelving, and Locker Manufacturing	500
335121	Residential Electric Lighting Fixture Manufacturing	500
335122	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing	500
339111	Laboratory Apparatus and Furniture Manufacturing	500
339114	Dental Equipment and Supplies Manufacturing	500
337211	Wood Office Furniture Manufacturing	500
337212	Custom Architectural Woodwork and Millwork Manufacturing	500
332312	Fabricated Structural Metal Manufacturing (pt)	500

TABLE 2.—SMALL BUSINESS ADMINISTRATION (SBA) SMALL BUSINESS SIZE STANDARDS FOR COMPANIES OWNING FACILITIES IN THE METAL FURNITURE SOURCE CATEGORY BY NAICS CODES [a, b]—Continued

1997 NAICS code	Product description	SBA size standard (employees)
336391	Motor Vehicle Air-Conditioning Manufacturing	750
811420	Reupholstery and Furniture Repair	$5 million (sales)

[a] The Agency assumed a small business size definition of 1,000 employees for those companies included in the SBREFA analysis without available information on SIC or NAICS code.

[b] Code of Federal Regulations (CFR). Small Business Size Standards-Part 121. 13-CFR–121. January 2001. As obtained from <http://www.sba.gov/regulations/part121.pdf>.

After considering the economic impacts of today's proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities.

In accordance with the RFA and SBREFA, the EPA conducted an assessment of the proposed standards on small businesses within the metal furniture coating industry. Based on Small Business Administration size definitions and reported sales and employment data, EPA's survey identified 10 of the 24 companies owning metal furniture facilities as small businesses. Although small businesses represent almost 42 percent of the companies within the source category, they are expected to incur 12 percent of the total industry compliance costs. Under the proposed standards, the average annual compliance cost share of sales for small businesses is 0.18 percent, with two of the ten small businesses not expected to incur any additional costs because they are permitted as synthetic minor HAP emission sources. In addition, small businesses in this industry typically have 5 percent profit margins. For more information, consult the docket for this project.

Although this 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 this proposed rule on small entities, consistent with our obligations under the CAA. We solicited input from small entities during the data-gathering phase of the proposed rulemaking.

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-HAP coatings (i.e., pollution prevention) that meet the proposed standards instead of using add-on capture and control systems. This method of compliance can be demonstrated with minimum burden by using purchase and usage records. No testing of materials would be required, as the facility owner could show that their coatings meet the emission limits by providing formulation data supplied by the manufacturer.

We continue to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

H. Paperwork Reduction Act

The information collection requirements in the proposed standards have been submitted for approval to the 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. 1952.01) and a copy may be obtained from Sandy Farmer by mail at the Collection Strategies Division (2822), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, by email at farmer.sandy@epa.gov, or by calling (202) 260–2740. 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 owners and 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 monthly compliance period, mass fraction organic HAP, density, and, for coatings only, volume fraction solids.

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

The monitoring, recordkeeping, and reporting burden in the fifth year after the effective date of the promulgated rule is estimated to be approximately 165,000 labor hours at a cost of approximately $11 million for new and existing sources.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

Under the Paperwork Reduction Act, 44 U.S.C. 3501, *et seq.*, the EPA must consider the paperwork burden imposed by any information collection request in a proposed or final rule.

Comments are requested on the Agency'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. Environmental Protection Agency (2822); 1200 Pennsylvania Ave., NW., Washington, DC 20460; or by courier, send comments on the ICR to the Director, Collection Strategies Division; U.S. Environmental Protection Agency (2822); 401 M Street, SW., Room 925H, West Tower; Washington, DC; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, 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 April 24, 2002, a comment to OMB is best assured of having its full effect if OMB receives it by May 24, 2002. The final rule will respond to any OMB or public comments on the information collection requirements contained in this 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, section 12(d) (15 U.S.C. 272 note), directs all Federal agencies to use voluntary consensus standards (VCS) in their 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 procedures, business practices, etc.) that are developed or adopted by one or more VCS bodies. The NTTAA directs EPA to provide Congress, through annual reports to OMB, with explanations when EPA does not use available and applicable VCS.

Consistent with the NTTAA, EPA conducted searches to identify VCS for use in emissions monitoring. The search for emissions monitoring procedures identified 20 VCS that appeared to have possible use in lieu of EPA standard reference methods. However, after reviewing the available standards, EPA determined that ten of the candidate consensus standards (ASTM D3154–00, ASTM D3271–87, ASTM D3464–96, ASTM D3796–90, ASTM D3960–98, ASTM D6053–96, ASTM E337–84, ISO 9096: 1992, PTC 19–10–1981, and EN 1093–4:1996) identified for measuring emissions of the HAP or surrogates subject to the proposed emission standards would not be practical due to lack of equivalency, documentation, and validation data (Docket A–97–47). Seven of the remaining candidate consensus standards (BSR/ASME MFC 13m, ASTM Z6871Z, ISO/DIS 14164, ISO PWI 17895, ISO/DIS 11890–1, ISO/DIS 11890–2, and PREN 12619) are under development. The EPA plans to follow, review, and consider adopting these standards after their development is completed.

The ASTM 2369–98 is practical for EPA use as an acceptable alternative in measuring the volatile matter content of surface coatings. This VCS uses the same techniques, equipment, and procedures as Method 24. The EPA will incorporate by reference ASTM D2369–98 into 40 CFR 63.14 in the near future.

The ASTM D2697–86 (1998) and ASTM D6093–97 are acceptable procedures for use in determining the volume fraction of solids for a variety of coatings. The EPA will incorporate by reference ASTM D2697–86 (1998) and ASTM D6093–97 into 40 CFR 63.14 in the near future.

Six consensus standards: ASTM D1475–98, ASTM D2369–98, ASTM D3792–99, ASTM D4017–96a, ASTM D4457–85(Reapproved 91), and ASTM D5403–93 are already incorporated by reference in EPA Method 24; and five consensus standards: ASTM D1979–97, ASTM D3432–89, ASTM D4747–87, ASTM D4827–93, and ASTM PS 9–94 are incorporated by reference in EPA Method 311.

The EPA takes comment on proposed compliance demonstration requirements in the proposed standards and specifically invites the public to identify potentially-applicable VCS. Commentors should also explain why the proposed standards should adopt these VCS in lieu of EPA's methods. 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 method other than Method 301, 40 CFR part 63, appendix A, was used).

Sections 63.4964 through 63.4966 of the proposed standards list EPA testing methods and performance standards included. Most of the standards have been used by States and industry for more than 10 years. Nevertheless, any State or source may apply to EPA for permission to use alternative methods in place of any of the EPA testing methods or performance standards listed.

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.

Dated: March 19, 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 RRRR to read as follows:

Subpart RRRR—National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Furniture

Sec.

What This Subpart Covers

63.4880 What is the purpose of this subpart?
63.4881 Am I subject to this subpart?
63.4882 What parts of my plant does this subpart cover?
63.4883 When do I have to comply with this subpart?

Emission Limitations

63.4890 What emission limits must I meet?
63.4891 What are my options for meeting the emission limits?
63.4892 What operating limits must I meet?
63.4893 What work practice standards must I meet?

General Compliance Requirements

63.4900 What are my general requirements for complying with this subpart?
63.4901 What parts of the General Provisions apply to me?

Notifications, Reports, and Records

63.4910 What notifications must I submit?
63.4920 What reports must I submit?
63.4930 What records must I keep?
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What This Subpart Covers

§ 63.4880 What is the purpose of this subpart?

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

§ 63.4881 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 metal furniture.

(1) Surface coating is the application of coatings to a substrate using, for example, spray guns or dip tanks.

(2) Metal furniture means furniture or components of furniture constructed either entirely or partially from metal. Metal furniture includes, but is not limited to, components of the following types of products as well as the products themselves: household, office, institutional, laboratory, hospital, public building, restaurant, barber and beauty shop, and dental furniture; office and store fixtures; partitions; shelving; lockers; lamps and lighting fixtures; and wastebaskets.

(b) You are subject to this subpart if you own or operate a new, reconstructed, or existing affected source, as defined in § 63.4882, 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 that meets any of the criteria of paragraphs (c)(1) through (5) of this section.

(1) Surface coating conducted at a source that uses only coatings, thinners, and cleaning materials that contain no organic HAP.

(2) Surface coating of metal components of wood furniture conducted in an operation that is subject to the wood furniture manufacturing NESHAP in subpart JJ of this part.

(3) Surface coating that occurs at research or laboratory facilities or that is part of janitorial, building, and facility maintenance operations.

(4) Surface coating of only small items such as knobs, hinges, or screws that have a wider use beyond metal furniture are not subject to this subpart unless the surface coating occurs at a metal furniture source.

(5) Surface coating of metal furniture conducted for the purpose of repairing or maintaining metal furniture used by a facility and not for commerce is not subject to this subpart, unless organic HAP emissions from the surface coating itself are as high as the rates specified in paragraph (b) of this section.

§ 63.4882 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 metal furniture:

(1) All coating operations as defined in § 63.4981;

(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 April 24, 2002, and the construction is of a completely new metal furniture surface coating facility where previously no metal furniture 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.

§ 63.4883 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 §§ 63.4940, 63.4950, and 63.4960.

(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 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 § 63.4910 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

§ 63.4890 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 0.094 kilogram (kg) organic HAP per liter (0.78 pound per gallon (lb/gal)) of coating solids used during each compliance period, determined according to the procedures in § 63.4941, § 63.4951, or § 63.4961.

(b) For an existing affected source, you must limit organic HAP emissions to the atmosphere to no more than 0.12 kg organic HAP per liter (1.0 lb/gal) of coating solids used during each compliance period, determined according to the procedures in § 63.4941, § 63.4951, or § 63.4961.

§ 63.4891 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 § 63.4890. 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 § 63.4930(c), and you must report it in the next semiannual compliance report required in § 63.4920.

(a) *Compliant material option.* Demonstrate that the organic HAP content of each coating used in the coating operation(s) is less than or equal to the applicable emission limit in § 63.4890 and that each thinner and each cleaning material used contains no organic HAP. You must meet all the requirements of §§ 63.4940, 63.4941, and 63.4942 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 in § 63.4890, calculated as a monthly emission rate. You must meet all the requirements of §§ 63.4950, 63.4951, and 63.4952 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 capture and add-on control efficiencies achieved, the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit in § 63.4890, calculated as a monthly emission rate. If you use this compliance option, you must also demonstrate that all capture systems and add-on control devices for the coating operation(s) meet the operating limits required in § 63.4892, except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4961(j); and that you meet the work practice standards required in § 63.4893. You must meet all the requirements of §§ 63.4960 through 63.4968 to demonstrate compliance with the emission limits, operating limits, and work practice standards using this option.

§ 63.4892 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 § 63.4961(j), you must meet the operating limits specified in Table 1 of 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 procedures in § 63.4967. You must meet the operating limits at all times after you establish them.

(c) If you use an add-on control device other than those listed in Table 1 of 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).

§ 63.4893 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 controlled coating operation(s) for which you use this option; or you must meet an alternative standard as provided in paragraph (c) of this section. The plan must specify practices and procedures to ensure that, at a minimum, the elements specified in paragraphs (b)(1) through (5) of this section are implemented.

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

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

(3) Organic-HAP-containing 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-containing coatings and other materials must be closed except when adding to, removing, or mixing the contents.

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

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

General Compliance Requirements

§ 63.4900 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 § 63.4891(a) and (b), must be in compliance with the applicable emission limit in § 63.4890 at all times.

(2) Any coating operation(s) for which you use the emission rate with add-on controls option, as specified in § 63.4891(c), must be in compliance with the applicable emission limit in § 63.4890 at all times except during periods of startup, shutdown, and malfunction. Each controlled coating operation must be in compliance with the operating limits for emission capture systems and add-on control devices required by § 63.4892 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 § 63.4961(j). Each controlled coating operation must be in compliance with the work practice standards in § 63.4893 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 § 63.4883 and the date when the initial emission capture system and add-on control device performance tests have been completed, as specified in § 63.4960. This requirement does not apply to a solvent recovery system for which you conduct a liquid-liquid material balance according to § 63.4961(j).

(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.

§ 63.4901 What parts of the General Provisions apply to me?

Table 2 of this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

Notifications, Reports, and Records

§ 63.4910 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 1 year 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 §§ 63.4940, 63.4950, or 63.4960 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 §§ 63.4940, 63.4950, or 63.4960 that applies to your affected source.

(4) Identification of the compliance option or options specified in § 63.4891 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 of and statement of the cause of the deviation.

(ii) If you failed to meet the applicable emission limit in § 63.4890, include all the calculations you used to determine the kg organic HAP emitted per liter 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 § 63.4941(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 § 63.4951.

(8) The calculation of kg organic HAP emitted per liter 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 (H_c) for one coating, using Equation 1 of § 63.4941.

(ii) For the emission rate without add-on controls option, provide the calculation of the total mass of organic HAP emissions during the initial compliance period (H_e); the calculation of the total volume of coating solids used during the initial compliance period (V_{st}); and the calculation of the organic HAP emission rate for the initial compliance period (H_{avg}), using Equations 1, 2, and 3, respectively, of § 63.4951.

(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 during the initial compliance period (H_e), using Equations 1 and 1A through 1C of § 63.4951; the calculation of the total volume of coating solids used during the initial compliance period (V_{st}), using Equation 2 of § 63.4951; the calculation of the mass of organic HAP emission reduction during the initial compliance period by emission capture systems and add-on control devices, using Equations 1 and 1A through 1D of § 63.4961 for H_C, and Equations 2 and 3 of § 63.4961 for H_{CSR}, as applicable; and the calculation of the organic HAP emission rate (H_{HAP}) for the initial compliance period, using either Equation 4 of § 63.4961 or Equation 1 of § 63.4962, as applicable.

(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. 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 § 63.4961(j).

(i) For each emission capture system, a summary of the data and copies of the calculations supporting the determination that the emission capture system is a permanent total enclosure (PTE) or a measurement of the emission capture system efficiency. Include a description of the protocol followed for measuring capture efficiency, summaries of any capture efficiency tests conducted, and any calculations supporting the capture efficiency determination. If you use the data quality objective (DQO) or lower confidence limit (LCL) approach, you must also include the statistical calculations to show you meet the DQO or LCL criteria in appendix A to subpart KK of this part. You do not need to submit complete test reports.

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

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

(iv) A statement of whether or not you developed and implemented the work practice plan required by § 63.4893.

§ 63.4920 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.

(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 §§ 63.4940, 63.4950, or 63.4960 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 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 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.

(iv) Identification of the compliance option or options specified in § 63.4891 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 (§ 63.4891(b) or (c)), the calculation results for each monthly organic HAP emission rate during the 6-month reporting period.

(4) *No deviations.* If there were no deviations from the emission limitations in §§ 63.4890, 63.4892, and 63.4893 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 § 63.4890, 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, and of 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 (H_C, using Equation 1 of § 63.4941) for each coating identified in paragraph (a)(5)(i) of this section. You do not need to submit background data supporting this calculation, for example, 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, for example, 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 § 63.4890, 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 organic HAP emission rate exceeded the applicable emission limit in § 63.4890.

(ii) The calculations used to determine the organic HAP emission rate for the compliance period in which the deviation occurred. You must submit the calculations for Equations 1, 1A through 1C, 2, and 3 in § 63.4951; and if applicable, the calculation used to determine R_w according to § 63.4951(e)(4). You do not need to submit background data supporting these calculations, for example, 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 organic HAP emission rate exceeded the applicable emission limit in § 63.4890.

(ii) The calculations used to determine the 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 during the compliance period (H_e), using Equations 1 and 1A through 1C of § 63.4951 and, if applicable, the calculation used to determine R_w according to § 63.4951(e)(4); the calculation of the total volume of coating solids used during the compliance period (V_{st}), using Equation 2 of § 63.4951; the calculation of the mass of organic HAP emission reduction during the compliance period by emission capture systems and add-on control devices, using Equations 1 and 1A through 1D of § 63.4961 for H_C, and Equations 2 and 3 of § 63.4961 for H_{CSR}, as applicable; and the calculation of the organic HAP emission rate for the compliance period (H_{HAP}), using either Equation 4 of § 63.4961 or Equation 1 of § 63.4962, as applicable. You do not need to submit the background data supporting these calculations, for example information provided by materials suppliers or manufacturers, or test reports.

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

(iv) A brief description of the CPMS.

(v) The date of the latest CPMS certification or audit.

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

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

(viii) The date and time period of each deviation from an operating limit in Table 1 of this subpart; date and time period of any bypass of the add-on control device; and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(ix) A summary of the total duration of each deviation from an operating limit in Table 1 of this subpart and each bypass of the add-on control device during the semiannual reporting period and the total duration as a percent of the total source operating time during that semiannual reporting period.

(x) A breakdown of the total duration of the deviations from the operating limits in Table 1 of this subpart and bypasses of the add-on control device during the semiannual reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

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

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

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

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

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

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

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

(2) If your actions were not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report as described in 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).

§ 63.4930 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 (H_c), using Equation 1 of § 63.4941.

(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 during each compliance period (H_e), using Equations 1, 1A through 1C, and 2 of § 63.4951 and, if applicable, the calculation used to determine R_w according to § 63.4951(e)(4); the calculation of the total volume of coating solids used during each compliance period (V_{st}), using Equation 2 of § 63.4951; and the calculation of the organic HAP emission rate for each compliance period (H_{avg}), using Equation 3 of § 63.4951.

(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 during each compliance period (H_e), using Equations 1 and 1A through 1C of § 63.4951 and, if applicable, the calculation used to determine R_w according to § 63.4951(e)(4);

(ii) The calculation of the total volume of coating solids used during each compliance period (V_{st}), using Equation 2 of § 63.4951;

(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 § 63.4961 for H_C, and Equations 2 and 3 of § 63.4961 for H_{CSR}, as applicable;

(iv) The calculation of the organic HAP emission rate for each compliance period (H_{HAP}), using either Equation 4 of § 63.4961 or Equation 1 of § 63.4962, as applicable.

(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 § 63.4951 for organic HAP contained in waste materials sent to or designated for shipment to a treatment, storage, and disposal facility (TSDF) according to § 63.4951(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 § 63.4951, 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 § 63.4951.

(3) The methodology used in accordance with § 63.4951(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 (9) of this section.

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

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

(3) The records required to show continuous compliance with each operating limit specified in Table 1 of this subpart that applies to you.

(4) If you operate under multiple operating conditions that affect emission capture system efficiency or add-on control device organic HAP destruction or removal efficiency, and you are using different emission capture system efficiency or add-on control device organic HAP destruction or removal efficiency factors for each condition, then you must keep records of the data you used to calculate the organic HAP emission rate for each compliance period, as described by Equation 1 in § 63.4962.

(5) 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 § 63.4965(a).

(6) 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 §§ 63.4964 and 63.4965(b) through (e), including the records specified in paragraphs (k)(6)(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 § 63.4965(e), if applicable.

(7) The records specified in paragraphs (k)(7)(i) and (ii) of this section for each add-on control device organic HAP destruction or removal efficiency determination as specified in § 63.4966.

(i) Records of each add-on control device performance test conducted according to §§ 63.4964 and 63.4966.

(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.

(8) Records of the data and calculations you used to establish the emission capture and add-on control device operating limits as specified in § 63.4967 and to document compliance with the operating limits as specified in Table 1 of this subpart.

(9) A record of the work practice plan required by § 63.4893 and documentation that you are implementing the plan on a continuous basis.

§ 63.4931 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

§ 63.4940 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 § 63.4941. The initial compliance period begins on the applicable compliance date specified in § 63.4883 and ends on the last day of the first full month following the compliance date. The initial compliance demonstration includes the calculations according to § 63.4941 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 § 63.4890 and you used no thinners or cleaning materials that contained organic HAP.

§ 63.4941 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 § 63.4890 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 §§ 63.4892 and 63.4893, 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 HAP content of cleaning materials that are reclaimed and reused onsite 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 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 (for example, 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 (for example, 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 non-aqueous 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 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 3 or 4 of this subpart. If you use the tables, you must use the values in Table 3 for all solvent blends that match Table 3 entries, and you may only use Table 4 if the solvent blends in the materials you use do not match any of the solvent blends in Table 3 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 3 or 4 of 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 H_C, 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:

$$H_c = \frac{(D_c)(W_c)}{V_s} \qquad (\text{Eq. } 1)$$

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 calculated organic HAP content, H_C, for each coating used during the initial compliance period must be less than or equal to the applicable emission limit in § 63.4890; 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 §§ 63.4930 and 63.4931. As part of the Notification of Compliance Status required in § 63.4910, 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 § 63.4890, and you used no thinners or cleaning materials that contained organic HAP.

§ 63.4942 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, H_C, determined using Equation 1 of § 63.4941, exceeds the applicable emission limit in § 63.4890, and use no thinner or cleaning material that contains organic HAP, determined according to § 63.4941(a). Each month following the initial compliance period described in § 63.4940 is a compliance period.

(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 §§ 63.4910(c)(6) and 63.4920(a)(5).

(c) As part of each semiannual compliance report required by § 63.4920, 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 § 63.4890, 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 § 63.4890 and you used no thinner or cleaning material that contained organic HAP.

(d) You must maintain records as specified in §§ 63.4930 and 63.4931.

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

§ 63.4950 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 § 63.4951. The initial compliance period begins on the applicable compliance date specified in § 63.4883 and ends on the last day of the first full month following the compliance date. The initial compliance demonstration includes the calculations showing that the organic HAP emission rate for the initial compliance period was equal to or less than the applicable emission limit in § 63.4890.

§ 63.4951 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 § 63.4890, but is not required to meet the operating limits or work practice standards in §§ 63.4892 and 63.4893, respectively. You must meet all the requirements of this section to demonstrate initial compliance with the applicable emission limit in § 63.4890 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 include organic HAP in coatings, thinners, or cleaning materials that are reclaimed and reused in the coating operation 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 the compliance period according to the requirements in § 63.4941(a).

(b) *Determine the volume fraction of coating solids for each coating.* Determine the volume fraction of coating solids for each coating used during the compliance period according to the requirements in § 63.4941(b).

(c) *Determine the density of each material.* Determine the density of each coating, thinner, and cleaning material used during the compliance period according to the requirements in § 63.4941(c) 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 the compliance period by measurement or usage records.

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

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

Where:

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

$$A = \sum_{i=1}^{m} \left(Vol_{c,i}\right)\left(D_{c,i}\right)\left(W_{c,i}\right) \qquad \text{(Eq. 1A)}$$

Where:

A = total mass of organic HAP in the coatings used during the compliance period, kg.
$Vol_{c,i}$ = total volume of coating, i, used during the compliance period, 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 compliance period.

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

$$B = \sum_{j=1}^{m} \left(Vol_{t,j}\right)\left(D_{t,j}\right)\left(W_{t,j}\right) \qquad \text{(Eq. 1B)}$$

Where:

B = total mass of organic HAP in the thinners used during the compliance period, kg.
$Vol_{t,j}$ = total volume of thinner, j, used during the compliance period, 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 compliance period.

(3) Calculate C, the kg organic HAP in the cleaning materials used during the compliance period using Equation 1C of this section:

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

Where:

C = total mass of organic HAP in the cleaning materials used during the compliance period, kg.
$Vol_{s,k}$ = total volume of cleaning material, k, used during the compliance period, 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 compliance period.

(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 (R_w) in the calculation of H_e (Equation 1 of this section), then you must determine R_w according to paragraphs (e)(4)(i) through (iv) of this section.

(i) You may include in the determination of R_w 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 in R_w the organic HAP contained in wastewater.

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

(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 § 63.4930(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 V_{st}, the total volume of coating solids used, liters, which is the combined volume of coating solids for all the coatings used during the compliance period, using Equation 2 of this section:

$$V_{st} = \sum_{i=1}^{m} \left(Vol_{c,i}\right)\left(V_{s,i}\right) \qquad \text{(Eq. 2)}$$

Where:

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

$Vol_{c,i}$ = total volume of coating, i, used during the compliance period, liters.

$V_{s,i}$ = volume fraction of coating solids for coating, i, liter solids per liter coating, determined according to § 63.4941(b).

m = number of coatings used during the compliance period.

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

$$H_{avg} = \frac{H_e}{V_{st}} \qquad \text{(Eq. 3)}$$

Where:

H_{avg} = organic HAP emission rate for the compliance period, kg organic HAP per liter coating solids.

H_e = total mass of organic HAP emissions from all materials used during the compliance period, kg, as calculated by Equation 1 of this section.

V_{st} = total volume of coating solids used during the compliance period, liters, as calculated by Equation 2 of this section.

(h) *Compliance demonstration.* The organic HAP emission rate for the initial compliance period, H_{avg}, must be less than or equal to the applicable emission limit in § 63.4890. You must keep all records as required by §§ 63.4930 and 63.4931. As part of the Notification of Compliance Status required by § 63.4910, 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 § 63.4890, determined according to this section.

§ 63.4952 How do I demonstrate continuous compliance with the emission limitations?

(a) To demonstrate continuous compliance, the organic HAP emission rate for each compliance period, determined according to § 63.4951(a) through (g), must be less than or equal to the applicable emission limit in § 63.4890. Each month following the initial compliance period described in § 63.4950 is a compliance period.

(b) If the organic HAP emission rate for any compliance period exceeded the applicable emission limit in § 63.4890, this is a deviation from the emission limitations for that compliance period and must be reported as specified in §§ 63.4910(c)(6) and 63.4920(a)(6).

(c) As part of each semiannual compliance report required by § 63.4920, 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 § 63.4890.

(d) You must maintain records as specified in §§ 63.4930 and 63.4931.

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

§ 63.4960 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 § 63.4883. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4961(j), you must conduct a performance test of each capture system and add-on control device according to §§ 63.4964, 63.4965, and 63.4966, and establish the operating limits required by § 63.4892, no later than 180 days after the applicable compliance date specified in § 63.4883. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.4961(j), you must initiate the first material balance no later than 180 days after the applicable compliance date specified in § 63.4883.

(2) You must develop and begin implementing the work practice plan required by § 63.4893 no later than the compliance date specified in § 63.4883.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of § 63.4961. The initial compliance period begins on the applicable compliance date specified in § 63.4883 and ends on the last day of the first full month following the compliance date. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.4964, 63.4965, and 63.4966; results of liquid-liquid material balances conducted according to § 63.4961(j); calculations showing whether the organic HAP emission rate for the initial compliance period was equal to or less than the emission limit in § 63.4890(a); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.4968; and documentation of whether you developed and implemented the work practice plan required by § 63.4893.

(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by § 63.4892 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.

(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

§ 63.4883. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4961(j), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§ 63.4964, 63.4965, and 63.4966, and establish the operating limits required by § 63.4892, no later than the compliance date specified in § 63.4883. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.4961(j), you must initiate the first material balance no later than the compliance date specified in § 63.4883.

(2) You must develop and begin implementing the work practice plan required by § 63.4893 no later than the compliance date specified in § 63.4883.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of § 63.4961. The initial compliance period begins on the applicable compliance date specified in § 63.4883 and ends on the last day of the first full month following the compliance date. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.4964, 63.4965, and 63.4966; results of liquid-liquid material balances conducted according to § 63.4961(j); calculations showing whether the organic HAP emission rate for the initial compliance period was equal to or less than the emission limit in § 63.4890(b); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.4968; and documentation of whether you developed and implemented the work practice plan required by § 63.4893.

§ 63.4961 How do I demonstrate initial compliance?

(a) *When add-on controls are used.* 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 limit in § 63.4890, and each controlled coating operation must meet the operating limits and work practice standards required in §§ 63.4892 and 63.4893, respectively. 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.

(b) *Compliance with operating limits.* Except as provided in § 63.4960(a)(4), you must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by § 63.4892, using the procedures specified in §§ 63.4967 and 63.4968.

(c) *Compliance with work practice requirements.* You must develop, implement, and document your implementation of the work practice plan required by § 63.4893 during the initial compliance period, as specified in § 63.4930.

(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 § 63.4890.

(e) *Determine the mass fraction of organic HAP, density, volume used, and volume fraction of coating solids.* Follow the procedures specified in § 63.4951(a) through (d) to determine the mass fraction of organic HAP, density, and volume of each coating, thinner, and cleaning material used during the compliance period; and the volume fraction of coating solids for each coating used during the compliance period.

(f) *Calculate the total mass of organic HAP emissions before add-on controls.* Using Equation 1 of § 63.4951, calculate the total mass of organic HAP emissions before add-on controls from all coatings, thinners, and cleaning materials used during the compliance period, H_e.

(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 the compliance period. 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 controlled coating operations not using liquid-liquid material balance, H_C.* 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 H_C, using Equation 1 of this section. The calculation of H_C 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 the compliance period. For any period of time a deviation specified in § 63.4963(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:

$$H_c = \left(A_I + B_I + C_I\right)\left(\frac{CE}{100} \times \frac{DRE}{100}\right) + H_{unc} \qquad \text{(Eq. 1)}$$

Where:

H_C = mass of organic HAP emission reduction for the controlled coating operation during the compliance period, kg.

A_I = total mass of organic HAP in the coatings used in the controlled coating operation during the compliance period, excluding coatings used during deviations, kg, as calculated in Equation 1A of this section.

B_I = total mass of organic HAP in the thinners used in the controlled coating operation during the compliance period, excluding thinners used during deviations, kg, as calculated in Equation 1B of this section.

C_I = total mass of organic HAP in the cleaning materials used in the controlled coating operation during the compliance period, excluding cleaning materials used during deviations, kg, as calculated in Equation 1C 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 §§ 63.4964 and 63.4965 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 §§ 63.4964 and 63.4966 to measure and record the organic HAP destruction or removal efficiency.

H_{unc} = total mass of organic HAP in the coatings, thinners, and cleaning materials used during all deviations specified in § 63.4963(c) and (d) that occurred during the compliance period in the controlled coating operation, kg, as calculated in Equation 1D of this section.

(1) Calculate A_I, the mass of organic HAP in the coatings used in the controlled coating operation, kg, using Equation 1A of this section. Do not include in the calculation of A_I the coatings used during any deviation specified in § 63.4963(c) or (d) that occurred during the month. Include such coatings in the calculation of H_{unc} in Equation 1D of this section.

$$A_I = \sum_{i=1}^{m} \left(Vol_{c,i}\right)\left(D_{c,i}\right)\left(W_{c,i}\right) \qquad \text{(Eq. 1A)}$$

Where:

A_I = total mass of organic HAP in the coatings used in the controlled coating operation during the compliance period, excluding coatings used during deviations, kg.

$Vol_{c,i}$ = total volume of coating, i, used during the compliance period except during deviations, 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 B_I, the mass of organic HAP in the thinners used in the controlled coating operation, kg, using Equation 1B of this section. Do not include in the calculation of B_I the thinners used during any deviation specified in § 63.4963(c) or (d) that occurred during the month. Include such coatings in the calculation of H_{unc} in Equation 1D of this section.

$$B_I = \sum_{j=1}^{n} \left(Vol_{t,j}\right)\left(D_{t,j}\right)\left(W_{t,j}\right) \qquad \text{(Eq. 1B)}$$

Where:

B_I = total mass of organic HAP in the thinners used in the controlled coating operation during the compliance period, excluding thinners used during deviations, kg.

$Vol_{t,j}$ = total volume of thinner, j, used during the compliance period except during deviations, 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 C_I, the mass of organic HAP in the cleaning materials used in the controlled coating operation, kg, using Equation 1C of this section. Do not include in the calculation of C_I the cleaning materials used during any deviation specified in § 63.4963(c) or (d) that occurred during the compliance period. Include such cleaning materials in the calculation of H_{unc} in Equation 1D of this section.

$$C_I = \sum_{k=1}^{p} \left(Vol_{s,k}\right)\left(D_{s,k}\right)\left(W_{s,k}\right) \qquad \text{(Eq. 1C)}$$

Where:

C_I = total mass of organic HAP in the cleaning materials used in the controlled coating operation during the compliance period, excluding cleaning materials used during deviations, kg.

$Vol_{s,k}$ = total volume of cleaning material, k, used during the compliance period except during deviations, 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 H_{unc}, the mass of organic HAP in the coatings, thinners, and cleaning materials used in the controlled coating operation during deviations specified in § 63.4963(c) and (d), using Equation 1D of this section:

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

Where:

H_{unc} = total mass of organic HAP in the coatings, thinners, and cleaning materials used during all deviations specified in § 63.4963(c) and (d) that occurred during the compliance period 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, thinning solvents, or cleaning materials.

(i) [Reserved]

(j) *Calculate the organic HAP emission reduction for controlled coating operations using liquid-liquid material balance, H_{CSR}.* For each controlled coating operation using a solvent recovery system for which you conduct liquid-liquid material balances, calculate H_{CSR} 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 the compliance period. Perform a liquid-liquid material balance for each compliance period 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 compliance period. The device must be initially certified by the manufacturer to be accurate to within ±2.0 percent of the mass of volatile organic matter recovered.

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

(3) Determine the mass fraction, C_V, of volatile organic matter for each coating, thinner, and cleaning material used in the coating operation controlled by the solvent recovery system during the compliance period, 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 compliance period, kg per liter, according to § 63.4951(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 compliance period, liters.

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

$$R_v = 100\frac{M_{VR}}{\sum_{i=1}^{m} Vol_i D_i WV_{c,i} + \sum_{j=1}^{n} Vol_j D_j WV_{t,j} + \sum_{k=1}^{p} Vol_k D_k WV_{s,k}} \qquad \text{(Eq. 2)}$$

Where:

R_V = volatile organic matter collection and recovery efficiency of the solvent recovery system during the compliance period, percent.

M_{VR} = mass of volatile organic matter recovered by the solvent recovery system during the compliance period, kg.

Vol_i = volume of coating, i, used in the coating operation controlled by the solvent recovery system during the compliance period, 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 compliance period, 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 compliance period, 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 compliance period.

n = number of different thinners used in the coating operation controlled by the solvent recovery system during the compliance period.

p = number of different cleaning materials used in the coating operation controlled by the solvent recovery system during the compliance period.

(7) Calculate the mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system during the compliance period, H_{CSR}, using Equation 3 of this section:

$$H_{CSR} = \left(A_I + B_I + C_I\right)\left(\frac{R_V}{100}\right) \qquad \text{(Eq. 3)}$$

Where:

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

A_I = total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 1A of this section.

B_I = total mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 1B of this section.

C_I = total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 1C of this section.

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

(k) *Calculate the total volume of coating solids used.* Determine V_{st}, the total volume of coating solids used, liters, which is the combined volume of coating solids for all the coatings used during the compliance period, using Equation 2 of § 63.4951.

(l) *Calculate the organic HAP emissions rate.* Determine H_{HAP}, the organic HAP emission rate to the atmosphere, kg organic HAP per liter coating solids used during the compliance period, using either Equation 4 of this section or Equation 1 of § 63.4962.

$$H_{HAP} = \frac{H_e - \sum_{i=1}^{q}\left(H_{C,i}\right) - \sum_{j=1}^{r}\left(H_{CSR,j}\right)}{V_{st}} \qquad \text{(Eq. 4)}$$

Where:

H_{HAP} = organic HAP emission rate for the compliance period, kg.

H_e = total mass of organic HAP emissions before add-on controls from all the coatings, thinners, and cleaning materials used during the compliance period, 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 liquid-liquid material balances, during the compliance period, kg, from Equation 1 of this section.

$H_{CSR,j}$ = total mass of organic HAP emission reduction for controlled coating operation, j, using a liquid-liquid material balance, during the compliance period, kg, from Equation 3 of this section.

V_{st} = total volume of coating solids used during the compliance period, liters, from Equation 2 of § 63.4951.

q = number of controlled coating operations except those controlled with a solvent recovery system.

r = number of coating operations controlled with a solvent recovery system.

(m) *Compliance demonstration.* To demonstrate initial compliance with the emission limit, H_{HAP}, calculated using either Equation 4 of this section or Equation 1 of § 63.4962, must be less than or equal to the applicable emission limit in § 63.4890. You must keep all records as required by §§ 63.4930 and 63.4931. As part of the Notification of Compliance Status required by § 63.4910, 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 § 63.4890, and you achieved the operating limits required by § 63.4892 and the work practice standards required by § 63.4893.

§ 63.4962 How do I determine the organic HAP emission rate for a controlled coating operation not using a liquid-liquid material balance if I operate it under different sets of representative operating conditions?

(a) This section applies only to controlled coating operations for which you do not conduct liquid-liquid material balances to demonstrate compliance. If you operate such a controlled coating operation, its emission capture system, or its add-on control device at multiple sets of representative operating conditions that result in different capture system or add-on control device efficiencies during a compliance period, you must determine the organic HAP emission rate according to either paragraph (b) or (c) of this section. The cases described in paragraphs (a)(1) and (2) of this section are examples of such operating conditions.

(1) You use a single add-on control device to reduce emissions from two or more coating operations and the number of coating operations vented to the add-on control device is variable during the compliance period. This case also includes situations where you have more than one capture device on the same coating operation and the number of capture devices vented to the add-on control device is changed during the compliance period.

(2) The coatings or cleaning materials you apply or the products to which you apply them differ during the compliance period, and the differences in resulting emissions are such that the emission capture efficiency or add-on control device efficiency changes. This case includes a change in the shape or size of the product coated such that there is a change in capture efficiency of the capture system. This case also includes a change in the materials that results in an inlet concentration to the add-on control device that is sufficiently lower such that the percent reduction the add-on control device can achieve changes, or a change in the volatility of the organic HAP in the materials used such that a lower proportion of the HAP is captured by the capture system and a higher amount is not captured by the capture system.

(b) If you conduct performance tests under the representative operating conditions that are expected to result in the lowest emission capture system and add-on control device efficiencies, as allowed under § 63.4964(b)(2), then determine the organic HAP emission rate according to the procedures and equations in § 63.4961. You do not need to follow paragraph (c) of this section.

(c) If you conduct performance tests under multiple sets of representative operating conditions to establish different emission capture system and add-on control device efficiencies for each set of operating conditions, as allowed under § 63.4964(b)(1), then determine the organic HAP emission rate according to paragraphs (c)(1) and (2) of this section.

(1) You must use Equation 1 of this section for determining HHAP, the organic HAP emission rate, kg organic HAP emitted per liter coating solids used:

$$\frac{H_{HAP} = H_e - \sum_{i=1}^{q}\left(H_{c,i_1} + H_{c,i_2} + \ldots H_{C,i_n}\right) - \sum_{j=1}^{r}\left(H_{CSR_j}\right)}{V_{st}} \qquad \text{(Eq. 1)}$$

Where:

H_{HAP} = organic HAP emission rate for the compliance period, kg organic HAP per liter coating solids.

H_e = total mass of organic HAP emissions before add-on controls from all coatings, thinners, and cleaning materials used during the compliance period, kg, determined according to § 63.4961(f).

$H_{C,i1}$, $H_{C,i2}$,$H_{C,in}$ = total mass of organic HAP emission reduction, kg, for controlled coating operation, i, while operating under each operating condition, n, during the compliance period, from Equation 1 of § 63.4961.

$H_{CSR,j}$ = total mass of organic HAP emission reduction, kg, for controlled coating operation, j, using a liquid-liquid material balance during the compliance period, from Equation 3 of § 63.4961.

V_{st} = total volume of coating solids used during the compliance period, liters, from Equation 2 of § 63.4951.

n = number of different operating conditions that affect emission capture system efficiency or add-on control device organic HAP destruction or removal efficiency under which the coating operation operated during the compliance period.

q = number of controlled coating operations not controlled by a solvent recovery system.
r = number of coating operations controlled by a solvent recovery system.

(2) To determine the $H_{C,in}$ in Equation 1 of this section, follow the steps in paragraphs (c)(2)(i) through (iii) of this section.

(i) Use Equation 1 of § 63.4961 to calculate the HC for each operating condition, n, of each controlled coating operation, i.

(ii) For the factors A_I, B_I, and C_I in Equation 1 of § 63.4961, use the mass of organic HAP contained in the coatings, thinners, and cleaning materials used in each controlled coating operation, i, while operating under each operating condition, n.

(iii) In Equation 1 of § 63.4961, use the emission capture system efficiency and add-on control device organic HAP destruction or removal efficiency that apply under each operating condition, n. These efficiencies for each operating condition are determined from the performance test required by § 63.4960 and as specified in § 63.4964(b).

§ 63.4963 How do I demonstrate continuous compliance with the emission limitations?

(a) To demonstrate continuous compliance with the applicable emission limit in § 63.4890, the organic HAP emission rate for each compliance period, determined according to the procedures in § 63.4961 (and in § 63.4962, if applicable), must be equal to or less than the applicable emission limit in § 63.4890. Each month following the initial compliance period described in § 63.4960 is a compliance period.

(b) If the organic HAP emission rate for any compliance period exceeded the applicable emission limit in § 63.4890, this is a deviation from the emission limitation for that compliance period and must be reported as specified in §§ 63.4910(c)(6) and 63.4920(a)(7).

(c) You must demonstrate continuous compliance with each operating limit required by § 63.4892 that applies to you, as specified in Table 1 of this subpart.

(1) If an operating parameter is out of the allowed range specified in Table 1 of this subpart, this is a deviation from the operating limit that must be reported as specified in §§ 63.4910(b)(6) and 63.4920(a)(7).

(2) If an operating parameter deviates from the operating limit specified in Table 1 of 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 §§ 63.4961 and 63.4962, 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 § 63.4961.

(d) You must meet the requirements for bypass lines in § 63.4968(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 §§ 63.4910(c)(6) and 63.4920(a)(7). For the purposes of completing the compliance calculations in §§ 63.4961 and 63.4962, 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 § 63.4961.

(e) You must demonstrate continuous compliance with the work practice standards in § 63.4893. 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 § 63.4930(k)(9), this is a deviation from the work practice standards that must be reported as specified in §§ 63.4910(c)(6) and 63.4920(a)(7).

(f) As part of each semiannual compliance report required in § 63.4920, 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 § 63.4890, and you achieved the operating limits required by § 63.4892 and the work practice standards required by § 63.4893 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 § 63.4900(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 §§ 63.4930 and 63.4931.

§ 63.4964 What are the general requirements for performance tests?

(a) You must conduct each performance test required by § 63.4960 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 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) If the coating operation, emission capture system, or add-on control device will be operated at different sets of representative operating conditions, you must conduct the performance test according to either paragraph (b)(1) or (2) of this section:

(1) Test at each of the representative operating conditions and establish emission capture system and add-on control device efficiencies and operating limits for each operating condition. To demonstrate continuous compliance following the performance test, record the conditions under which the process, emission capture system, and add-on control device are operating during each time period of operation, and calculate the organic HAP emission rate as described in § 63.4962.

(2) Test at the representative operating conditions that are expected to result in the lowest emission capture system and add-on control device efficiencies and establish efficiencies and operating limits based on this test. Use these efficiencies in the emission calculations in § 63.4961.

(c) You must conduct each performance test of an emission capture system according to the requirements in § 63.4965. You must conduct each performance test of an add-on control device according to the requirements in § 63.4966.

(d) The performance test to determine add-on control device organic HAP destruction or removal efficiency must consist of three runs as specified in § 63.7(e)(3) and each run must last at least 1 hour.

§ 63.4965 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 § 63.4960.

(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 of or evaporation of cleaning materials from the surfaces they are applied to occurs within the capture system. For example, this criterion is not met if parts enter the open shop environment when being moved between a spray booth and a curing oven.

(b) *Measuring capture efficiency.* If the capture system does not meet both of the criteria in paragraphs (a)(1) and (2) of this section, then you must use one of the three protocols described in paragraphs (c), (d), and (e) of this section to measure capture efficiency. The capture efficiency measurements use TVH capture efficiency as a surrogate for organic HAP capture efficiency. For the protocols in paragraphs (c) and (d) of this section, the capture efficiency measurement must consist of three test runs. Each test run must be at least 3 hours duration or the length of a production run, whichever is longer, up to 8 hours. For the purposes of this test, a production run means the time required for a single part to go from the beginning to the end of 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, referred to as TVH_{used}, to the mass of TVH emissions not captured by the emission capture system, referred to as $TVH_{uncaptured}$. 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, kg TVH per kg material, 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 TVH_{used}, 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:

$$TVH_{used} = \sum_{i=1}^{n} (TVH_i)(Vol_i)(D_i) \qquad \text{(Eq. 1)}$$

Where:

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.

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 $TVH_{uncaptured}$, 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 if the enclosure is a temporary total enclosure.

(ii) Use Method 204E 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, CE, of the emission capture system using Equation 2 of this section:

$$CE = \frac{(TVH_{used} - TVH_{uncaptured})}{TVH_{used}} \times 100 \qquad \text{(Eq. 2)}$$

Where:

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

TVH_{used} = total mass of TVH liquid input used in the coating operation during the capture efficiency test run, kg.

$TVH_{uncaptured}$ = total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

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

(d) *Gas-to-gas protocol using a temporary total enclosure or a building enclosure.* The gas-to-gas protocol compares the mass of TVH emissions captured by the emission capture system, referred to as $TVH_{captured}$, to the mass of TVH emissions not captured, referred to as $TVH_{uncaptured}$. 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 $TVH_{captured}$, the total mass, kg, of TVH emissions captured by the emission capture system during each capture efficiency test run as measured at the inlet to the add-on control device. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

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

(ii) If multiple emission streams from the capture system enter the add-on control device without a single common duct, then the emissions entering the add-on control device must be simultaneously measured in each duct and the total emissions entering the add-on control device must be determined.

(3) Use Method 204D or 204E of appendix M to 40 CFR part 51 to measure $TVH_{uncaptured}$, 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 if the enclosure is a temporary total enclosure.

(ii) Use Method 204E 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, CE, of the emission capture system using Equation 3 of this section:

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

Where:

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

$TVH_{captuted}$ = total mass of TVH captured by the emission capture system as measured at the inlet to the add-on control device during the emission capture efficiency test run, kg.

$TVH_{uncaptured}$ = total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

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

(e) *Alternative capture efficiency protocol.* As an alternative to the procedures specified in paragraphs (c) and (d) of this section, 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.

§ 63.4966 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 § 63.4960. 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 if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be more than 50 parts per million (ppm) at the control device outlet.

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

(3) Use Method 25A if the add-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.

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

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 (mol/m^3) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

(e) For each test run, determine the add-on control device organic emissions destruction or removal efficiency, DRE, using Equation 2 of this section:

$$DRE = \frac{M_{fi} - M_{fo}}{M_{fi}} \qquad \text{(Eq. 2)}$$

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.

§ 63.4967 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 § 63.4960 and described in §§ 63.4964, 63.4965, and 63.4966, you must establish the operating limits required by § 63.4892 according to this section, unless you have received approval for alternative monitoring and operating limits under § 63.8(f) as specified in § 63.4892.

(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, unless you are determining operating limits for multiple operating conditions as specified in § 63.4964(b)(1) and paragraph (f) of this section.

(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, unless you are determining operating limits for multiple operating conditions as specified in § 63.4964(b)(1) and paragraph (f) of this section.

(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, unless you are determining operating limits for multiple operating conditions as specified in § 63.4964(b)(1) and paragraph (f) of this section.

(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 replace the catalyst bed and conduct a new performance test to determine destruction efficiency according to § 63.4966.

(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, unless you are determining operating limits for multiple operating conditions as specified in § 63.4964(b)(1) and paragraph (f) of this section.

(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, unless you are determining operating limits for multiple operating conditions as specified in § 63.4964(b)(1) and paragraph (f) of this section.

(e) *Emission capture system.* For each capture device that is not part of a PTE that meets the criteria of § 63.4965(a), establish an operating limit for either the gas volumetric flow rate or duct static pressure, as specified in paragraphs (e)(1) and (2) of this section. The operating limit for a PTE is specified in Table 1 of this subpart.

(1) During the capture efficiency determination required by § 63.4960 and described in §§ 63.4964 and 63.4965, 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, unless you are determining operating limits for multiple operating conditions as specified in § 63.4964(b)(1) and paragraph (f) of this section.

(f) *Multiple operating conditions.* If you are determining operating limits for multiple operating conditions for the emission capture system or add-on control device as specified in § 63.4964(b)(1), you must conduct a performance test under each operating condition and establish the operating limits for the parameters under each operating condition according to paragraphs (f)(1) and (2) of this section.

(1) You must monitor and record the value of the parameter that corresponds to the applicable operating limit during the performance test under each operating condition.

(2) The average parameter value recorded during the performance test under each condition is the operating limit for that parameter when the coating operation is operating under that condition.

(g) *Concentrators.* If your add-on control device includes a concentrator, you must establish operating limits for the concentrator according to paragraphs (g)(1) and (2) 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.

§ 63.4968 What are the requirements for continuous parameter monitoring system (CPMS) installation, operation, and maintenance?

(a) *General.* You must install, operate, and maintain each CPMS specified in paragraphs (c), (e), and (f) 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 § 63.4920.

(c) *Thermal oxidizers and catalytic oxidizers.* If you are using a thermal oxidizer or catalytic oxidizer as an add-on control device (including those used with concentrators or with carbon adsorbers to treat desorbed concentrate streams), you must comply with the requirements in paragraphs (c)(1) through (3) of this section:

(1) For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.

(2) For a catalytic oxidizer, install gas temperature monitors 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.

(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's 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) *Emission capture systems.* The capture system monitoring system must comply with the applicable requirements in paragraphs (f)(1) and (2) of this section.

(1) For each flow measurement device, you must meet the requirements in paragraphs (a) and (f)(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 all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

(2) For each pressure drop measurement device, you must comply with the requirements in paragraphs (a) and (f)(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 all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

(g) *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 (g)(1) and (2) of this section.

(1) You must install a temperature monitor in the desorption gas stream. The temperature monitor must meet the requirements in paragraphs (a) and (c)(3) of this section.

(2) You must install a device to monitor pressure drop across the zeolite wheel or rotary carbon bed. The pressure monitoring device must meet the requirements in paragraphs (a) and (g)(2)(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 all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

Other Requirements and Information

§ 63.4980 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 EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are as follows:

(1) Approval of alternatives to the work practice standards in § 63.4893 under § 63.6(g).

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f), and as defined in § 63.90.

(3) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

§ 63.4981 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 (CPMS) means the total equipment that may be required to meet the data acquisition and availability requirements of this subpart, used to sample, condition (if applicable), analyze, and provide a record of coating operation, or capture system, or add-on control device parameters.

Controlled coating operation means a coating operation from which some or all of the organic HAP emissions are routed through an emission capture system and add-on control device.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limit, or operating limit, or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limit, or operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Emission limitation means 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).

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 § 63.4941(a)(1) through (3). 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; 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 § 63.4941. 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.

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 to Subpart RRRR of Part 63

If you are required to comply with operating limits by § 63.4892, you must comply with the applicable operating limits in the following table:

TABLE 1 TO SUBPART RRRR 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	the average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to § 63.4967(a).	i. collecting the combustion temperature data according to § 63.4968(c); ii. reducing the data to 3-hour block averages; and iii. maintaining the 3-hour average combustion 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 § 63.4967(b).	i. collecting the temperature data according to § 63.4968(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.
	b. either ensure that the average temperature difference catalyst bed in any 3-hour period does not fall below the temperature difference limit established according to § 63.4967(b) or develop and implement an inspection and maintenance plan according to § 63.4967(b)(3) and (4).	i. either collecting the temperature data according to across the § 63.4968(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 § 63.4967(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 § 63.4967(c).	i. measuring the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle according to § 63.4968(d); and ii. maintaining the total regeneration desorbing gas mass flow at or above the mass flow limit.

TABLE 1 TO SUBPART RRRR 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 * * *
	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 § 63.4967(c).	i. measuring the temperature of the carbon bed, after completing each regeneration and any cooling cycle, according to § 63.4968(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	the average condenser outlet (product side) gas temperature in any 3-hour period must not exceed the temperature limit established according to § 63.4967(d).	i. collecting the condenser outlet (product side) gas temperature according to § 63.4968(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 § 63.4965(a).	the direction of the air flow at all times must be into the enclosure; and either the average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minute; or the pressure drop across the enclosure must be at least 0.007 inch H2O, 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 § 63.4968(f)(1) or the pressure drop across the enclosure according to § 63.4968(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.
6. emission capture system that is a PTE according to § 63.4965(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 § 63.4967(e).	i. collecting the gas volumetric flow rate or duct static pressure for each not capture device according to § 63.4968(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 § 63.4967(g).	i. collecting the temperature data according to 63.4968(g); ii. reducing the data to 3-hour block averages; and iii. maintaining the 3-hour average temperature at or above the temperature limit.
	b. the average pressure drop of the dilute stream across the concentrator in any 3-hour period must not fall below the limit established according to § 63.4967(g).	i. collecting the pressure drop data according to § 63.4968(g); 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 2 TO SUBPART RRRR OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART RRRR

Citation	Subject	Applicable to subpart RRRR	Explanation
§ 63.1(a)(1)–(14)	General Applicability	Yes.	
§ 63.1(b)(1)–(3)	Initial Applicability Determination	Yes	Applicability to subpart RRRR is also specified in § 63.4881.
§ 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 RRRR.
§ 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 § 63.4981.
§ 63.3(a)–(c)	Units and Abbreviations	Yes.	

TABLE 2 TO SUBPART RRRR OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART RRRR—Continued

Citation	Subject	Applicable to subpart RRRR	Explanation
§ 63.4(a)(1)–(5)	Prohibited Activities	Yes.	
§ 63.4(b)–(c)	Circumvention/Severability	Yes.	
§ 63.5(a)	Construction/Reconstruction	Yes.	
§ 63.5(b)(1)–(6)	Requirements for Existing, Newly Constructed, and Reconstructed Sources.	Yes.	
§ 63.5(d)	Application for Approval of Construction/Reconstruction.	Yes.	
§ 63.5(e)	Approval of Construction/Reconstruction	Yes.	
§ 63.5(f)	Approval of Construction/Reconstruction Based on Prior State Review.	Yes.	
§ 63.6(a)	Compliance With Standards and Maintenance Requirements—Applicability.	Yes.	
§ 63.6(b)(1)–(7)	Compliance Dates for New and Reconstructed Sources.	Yes	Section 63.4883 specifies the compliance dates.
§ 63.6(c)(1)–(5)	Compliance Dates for Existing Sources	Yes	Section 63.4883 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, Malfunction.	Yes	Applies only to sources using an add-on and 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 RRRR 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 §§ 63.4964, 63.4965, and 63.4966.
§ 63.7(a)(2)	Performance Test Requirements—Dates	Yes	Applies only to performance tests for capture system and control device efficiency at sources using these to comply with the standard. Section 63.4960 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.
§ 63.7(g)–(h)	Performance TestRequirements—Data Analysis, Recordkeeping, Reporting, Waiver of Test.	Yes	Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standard.
§ 63.8(a)(1)–(3)	Monitoring Requirements—Applicability	Yes	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standard. Additional requirements for monitoring are specified in § 63.4968.
§ 63.8(a)(4)	Additional Monitoring Requirements	No	Subpart RRRR 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 § 63.4968.
§ 63.8(c)(4)	CMSs	No	Section 63.4968 specifies the requirements for the operation of CMS for capture systems and add-on control devices at sources using these to comply.

TABLE 2 TO SUBPART RRRR OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART RRRR—Continued

Citation	Subject	Applicable to subpart RRRR	Explanation
§ 63.8(c)(5)	COMS	No	Subpart RRRR does not have opacity or visible emission standards.
§ 63.8(c)(6)	CMS Requirements	No	Section 63.4968 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	Section 63.4920 requires reporting of CMS out-of-control periods.
§ 63.8(d)–(e)	Quality Control Program and CMS Performance Evaluation.	No	Subpart RRRR 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 RRRR does not require the use of continuous emissions monitoring systems.
§ 63.8(g)(1)–(5)	Data Reduction	No	Sections 63.4967 and 63.4968 specify monitoring data reduction.
§ 63.9(a)–(d)	Notification Requirements	Yes.	
§ 63.9(e)	Notification of Performance Test	Yes	Applies only to capture system and add-on control device performance tests at sources using these to comply with the standard.
§ 63.9(f)	Notification of Visible Emissions/Opacity Test	No	Subpart RRRR does not have opacity or visible emission standards.
§ 63.9(g)(1)–(3)	Additional Notifications When Using CMS	No	Subpart RRRR does not require the use of continuous emissions monitoring systems.
§ 63.9(h)	Notification of Compliance Status	Yes	Section 63.4910 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 §§ 63.4930 and 63.4931.
§ 63.10(b)(2)(i)–(v)	Recordkeeping Relevant Startup, to Shutdown, and Malfunction Periods and CMS.	Yes	Requirements for Startup, 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 RRRR 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 § 63.4920(a)(7)
§ 63.10(c)(9)–(15)		Yes.	
§ 63.10(d)(1)	General Reporting Requirements	Yes	Additional requirements are specified in § 63.4920.
§ 63.10(d)(2)	Report of Performance Test Results	Yes	Additional requirements are specified in § 63.4920(b).
§ 63.10(d)(3)	Reporting Opacity or Visible Emissions Observations.	No	Subpart RRRR does not require opacity or visible emissions observations.
§ 63.10(d)(4)	Progress Reports for Sources With Compliance Extensions.	Yes.	
§ 63.10(d)(5)	Startup, Shutdown, and Malfunction Reports	Yes	Applies only to add-on control devices at sources using these to comply with the standard.
§ 63.10(e)(1)–(2)	Additional CMS Reports	No	Subpart RRRR does not require the use of continuous emissions monitoring systems.
§ 63.10(e)(3)	Excess Emissions/CMS Performance Reports	No	Section 63.4920(b) specifies the contents of periodic compliance reports.
§ 63.10(e)(4)	COMS Data Reports	No	Subpart RRRR does not specify requirements for opacity or COMS.
§ 63.10(f)	Recordkeeping/Reporting Waiver	Yes.	
§ 63.11	Control Device Requirements/Flares	No	Subpart RRRR does not specify use of flares for compliance.
§ 63.12	State Authority and Delegations	Yes.	

TABLE 2 TO SUBPART RRRR OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART RRRR—Continued

Citation	Subject	Applicable to subpart RRRR	Explanation
§ 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 3 TO SUBPART RRRR 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. Ligroines (VM & P)	8032–32–4	0	None.
13. Lactol spirits	64742–89–6	0.15	Toluene.
14. Low aromatic white spirit	64742–82–1	0	None.
15. Mineral spirits	64742–88–7	0.01	Xylenes.
16. Hydrotreated naphtha	64742–48–9	0	None.
17. Hydrotreated light distillate	64742–47–8	0.001	Toluene.
18. Stoddard solvent	8052–41–3	0.01	Xylenes.
19. Super high-flash naphtha	64742–95–6	0.05	Xylenes.
20. Varsol® solvent	8052–49–3	0.01	0.5% xylenes, 0.5% ethyl benzene.
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 4 TO SUBPART RRRR OF PART 63.—DEFAULT ORGANIC HAP MASS FRACTION FOR PETROLEUM SOLVENT GROUPS[a]

Solvent type	Average organic HAP mass fraction	Typical organic HAP, percent by mass
Aliphatic[b]	0.03	1% Xylene, 1% Toluene, and 1% Ethylbenzene.
Aromatic[c]	0.06	4% Xylene, 1% Toluene, and 1% Ethylbenzene.

[a] Use this table only if the solvent blend does not match any of the solvent blends in Table 3 to this subpart and you only know whether the blend is aliphatic or aromatic.

[b] 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.

[c] 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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