



# Federal Register

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## **Part II**

# **Environmental Protection Agency**

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**40 CFR Part 63**

**National Emission Standards for  
Hazardous Air Pollutants: Surface Coating  
of Miscellaneous Metal Parts and  
Products; Proposed Rule**

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

[FRL-7229-7]

RIN 2060-AG56

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

**SUMMARY:** This action proposes national emission standards for hazardous air pollutants (NESHAP) for miscellaneous metal parts and products surface coating operations located at major sources of hazardous air pollutants (HAP). The 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 HAP emitted by these operations include xylene, toluene, methyl ethyl ketone (MEK), phenol, cresols/cresylic acid, 2-butoxyethanol, styrene, methyl isobutyl ketone (MIBK), ethyl benzene, and glycol ethers. Exposure to these substances has been demonstrated to cause adverse health effects such as irritation of the lung, eye, and mucus membranes, asthma, effects on the central nervous system, and cancer. In general, these findings have only been shown with concentrations higher than those typically in the ambient air. The proposed standards would reduce nationwide HAP emissions from major sources in this source category by approximately 48 percent.

**DATES:** *Comments.* Submit comments on or before October 15, 2002.

*Public Hearing.* If anyone contacts the EPA requesting to speak at a public hearing, they should do so by September 2, 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-97-34, U.S. EPA, 1200 Pennsylvania Avenue, NW., Washington, DC 20460. In person or by courier, deliver comments (in duplicate if possible) to: Air and Radiation Docket and Information Center (6102), Attention Docket Number A-97-34, U.S. EPA, 401 M Street, SW.,

Room M-1500, Washington, DC 20460. The EPA requests a separate copy also be sent to the contact person listed in **FOR FURTHER INFORMATION CONTACT**.

*Public Hearing.* If a public hearing is held, it will be held at the new EPA facility complex in Research Triangle Park, North Carolina. You should contact Ms. Janet Eck, Coatings and Consumer Products Group, Emission Standards Division (C539-03), U.S. EPA, Research Triangle Park, North Carolina 27711, telephone number (919) 541-7946, to request to speak at a public hearing or to find out if a hearing will be held.

*Docket.* Docket No. A-97-34 contains supporting information used in developing the proposed standards. The docket is located at the U.S. EPA, 401 M Street, SW., Washington, DC 20460 in Room M-1500, Waterside Mall (ground floor), and may be inspected from 8:30 a.m. to 5:30 p.m., Monday through Friday, excluding legal holidays.

**FOR FURTHER INFORMATION CONTACT:** Ms. Kim Teal, Coatings and Consumer Products Group, Emission Standards Division (C539-03), U.S. EPA, Research Triangle Park, NC 27711; telephone number (919) 541-5580; facsimile number (919) 541-5689; electronic mail (e-mail) address: [teal.kim@epa.gov](mailto:teal.kim@epa.gov).

**SUPPLEMENTARY INFORMATION:****Comments**

Comments and data may be submitted by e-mail to: [a-and-r-docket@epa.gov](mailto: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-97-34. 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: Ms. Kim Teal, c/o OAQPS Document Control Officer (C404-02), U.S. EPA, Research Triangle Park, NC 27711. The EPA will disclose information identified as CBI only to the extent allowed by the procedures set forth in 40 CFR part 2. If no claim of confidentiality accompanies a

submission when it is received by EPA, the information may be made available to the public without further notice to the commenter.

**Public Hearing**

Persons interested in presenting oral testimony or inquiring as to whether a hearing is to be held should contact Ms. Janet Eck, Coatings and Consumer Products Group, Emission Standards Division (C539-03), U.S. EPA, Research Triangle Park, 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 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 mailed on request from the Air and Radiation Docket and Information Center by calling (202) 260-7548. A reasonable fee may be charged for copying docket materials.

**World Wide Web (WWW)**

In addition to being available in the docket, an electronic copy of this proposed rule will also be available on the World Wide Web 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 miscellaneous metal parts and products. Facilities that coat

miscellaneous metal parts and products are covered under a wide range of Standard Industrial Classification (SIC) and North American Industrial Classification System (NAICS) codes. Some examples of common product

types included in this source category are listed in the following table. However, facilities classified under many other SIC or NAICS codes may be subject to the proposed standards if they meet the applicability criteria.

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

Category	SIC	NAICS	Examples of potentially regulated entities
Aerospace Equipment .....	3724 3728 376X	336413 336414 336415	Aircraft engines, aircraft parts, aerospace ground equipment.
Automobile Parts .....	3711 3713 3714 3292 3429 3465 3694 3829	335312 336111 336211 336312 33632 33633 33634 33637	Engine parts, vehicle parts and accessories, brakes, axles, etc.
Extruded Aluminum .....	3354 3365 3442 3446	331316 331524 332321 332323	Extruded aluminum, architectural components, coils, rod, and tubes.
Heavy Equipment .....	3511 3519 352X 353X	33312 333611 333618	Tractors, earth moving machinery.
Job Shops .....	3441	332312	Any of the products from the miscellaneous metal parts and products segments.
	3471 3499 3999	332722 332813 332991 332999 334119 336413 339999	
Large Trucks and Buses .....	3711 3713 3716	33612 336211	Large trucks and buses.
Magnet Wire .....	3351 3357	331319 331422 335929	Magnet wire.
Metal Buildings .....	3448	332311	Prefabricated metal: buildings, carports, docks, dwellings, greenhouses, panels for buildings.
Metal Containers .....	2655 3089 3325 3412 3443 5085	33242 81131 322214 326199 331513 332439	Drums, kegs, pails, shipping containers.
Metal Pipe and Foundry .....	331X 332X 336X 3399	331111 331513 33121 331221 331511	Plate, tube, rods, nails, spikes, etc.
Rail Transportation .....	3731 3743 4011 4741	33651 336611 482111	Brakes, engines, freight cars, locomotives.
Recreational Vehicles .....	3083 3354 3713 3714 3716 375X 3792	3369 331316 336991 336211 336112 336213 336214 336399	Motorcycles, motor homes, semitrailers, truck trailers.
Rubber-to-Metal Products .....	3061 3069 3479	326291 326299	Engine mounts, rubberized tank tread, harmonic balancers.
Structural Steel .....	3441	332311	Joists, railway bridge sections, highway bridge sections.

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

Category	SIC	NAICS	Examples of potentially regulated entities
Other Transportation Equipment .....	3448 3711 3519 3714 3715 3795 3621	332312 336212 336999 33635 56121 8111 56211	Miscellaneous transportation related equipment and parts.

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 is regulated by this action, you should examine the applicability criteria in § 63.3881 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
  - A. What is the source of authority for development of NESHAP?
  - B. What criteria are used in the development of NESHAP?
  - C. What are the health effects associated with HAP emissions from the surface coating of miscellaneous metal parts and products?
- II. Summary of the Proposed Rule
  - A. What source categories are affected by the proposed rule?
  - B. What is the relationship to other rules?
  - C. What are the primary sources of emissions and what are the emissions?
  - D. What is the affected source?
  - E. What are the emission limits, operating limits, and other standards?
  - F. What are the testing and initial compliance requirements?
  - G. What are the continuous compliance provisions?
  - H. What are the notification, recordkeeping, and reporting requirements?
- III. Rationale for Selecting the Proposed Standards
  - A. How did we select the source category?
  - B. How did we select the regulated pollutants?
  - C. How did we select the affected source?
  - D. How did we determine the basis and level of the proposed standards for existing and new sources?
  - E. How did we select the format of the proposed standards?
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- IV. Summary of Environmental, Energy, and Economic Impacts
  - A. What are the air impacts?
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- V. Administrative Requirements
  - A. Executive Order 12866, Regulatory Planning and Review
  - B. Executive Order 13132, Federalism
  - C. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments
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  - E. Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
  - F. Unfunded Mandates Reform Act of 1995
  - G. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601, *et seq.*
  - H. Paperwork Reduction Act
  - I. National Technology Transfer and Advancement Act

**I. Background**

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

Section 112 of the CAA requires us to list categories and subcategories of major sources and area sources of HAP and to establish NESHAP for the listed source categories and subcategories. The Miscellaneous Metal Parts and Products (Surface Coating) 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 emit or have the potential to emit equal to or greater than 9.1 megagrams per year (Mg/yr) (10 tons per year (tpy)) of any one HAP or 22.7 Mg/yr (25 tpy) of any combination of HAP.

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

Section 112 of the CAA requires that we establish NESHAP for the control of HAP from both new and existing major sources. The CAA requires the NESHAP to reflect the maximum degree of reduction in emissions of HAP that is

achievable. This level of control is commonly referred to as the MACT.

The MACT floor is the minimum control level allowed for NESHAP and is defined under section 112(d)(3) of the CAA. In essence, the MACT floor ensures that the standard is set at a level that assures that all major sources achieve the level of control at least as stringent as that already achieved by the better-controlled and lower-emitting sources in each source category or subcategory. For new 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 non-air quality health and environmental impacts, and energy requirements.

*C. What Are the Health Effects Associated With HAP Emissions From the Surface Coating of Miscellaneous Metal Parts and Products?*

The HAP emitted from the surface coating of miscellaneous metal parts and products include xylene, toluene, MEK, phenol, cresols/cresylic acid, 2-butoxyethanol, styrene, MIBK, ethyl benzene, and glycol ethers. These compounds account for about 90 percent of the nationwide HAP emissions from this source category. The HAP that would be controlled with the proposed rule are associated with a variety of adverse health effects. These adverse health effects include chronic health disorders (*e.g.*, irritation of the lung, eyes, and mucus membranes and

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

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

## II. Summary of the Proposed Rule

### A. What Source Categories Are Affected by the Proposed Rule?

The proposed rule would apply to you if you own or operate a miscellaneous metal parts and products surface coating facility that uses at least 250 gallons of coating materials per year and 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 miscellaneous metal parts and products surface coating facility as any facility engaged in the surface coating of any metal part or product that is not included in the definition of the affected source in NESHAP for another source category. The proposed rule would also apply to the surface coating of the plastic contained in parts and products that are pre-assembled from plastic and metal components, where greater than 50 percent of the coatings (by volume, determined on a rolling 12-month basis) are applied to the metal surfaces, and where the surface coating of the metal surfaces is subject to the proposed rule. If your source is subject to the proposed rule and you can demonstrate that more than 50 percent of your coatings are applied to the metal surfaces of pre-assembled plastic and metal components, then compliance with the proposed rule constitutes compliance with the plastic parts and products surface coating NESHAP currently under development. You must maintain records (such as coating usage or surface area) to document that more than 50 percent of the coatings are applied to metal surfaces.

You would not be subject to the proposed rule if your miscellaneous

metal parts and products surface coating facility is located at an area source. An area source of HAP is any facility that has the potential to emit HAP but is not a major source. You may establish area source status by limiting the source's potential to emit HAP through appropriate mechanisms available through your permitting authority.

The proposed rule also does not apply to surface coating conducted at a source that uses only coatings, thinners, and cleaning materials that contain no organic HAP, as determined according to the provisions in the proposed rule.

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

Also included on the July 16, 1992 source category list (57 FR 31576) were major sources emitting HAP from "asphalt/coal tar application-metal pipes" (hereafter referred to as asphalt coating). In developing the proposed rule, we decided not to establish MACT standards separately for the asphalt coating category but, rather, to include asphalt coating of metal pipes in the source category for coating of miscellaneous metal parts and products. Data and information gathered from the asphalt coating industry indicate that the equipment, emission characteristics, and applicable emission reduction measures are similar to the broad group of miscellaneous metal sources. Therefore, we are including asphalt coating in the proposed rule.

We believe it is technically feasible to regulate emissions from a variety of metal coating operations by a single rule. Many of the metal coating operations that we are proposing to regulate are collocated within individual facilities. Facilities with collocated metal coating operations could more easily comply with a single rule than with individual rules for each of the collocated operations. Several industry representatives also expressed interest in a generic rule that would specify consistent requirements for a wide range of coating operations. Another reason to develop a single rule to regulate metal coating operations is that it is more efficient and less costly to develop a single rule than to develop separate rules for several individually listed source categories which have similar emission characteristics and applicable emission reduction measures. A single rule will ensure that coating operations with comparable

HAP emissions and emission reduction measures are subject to the same requirements. In addition, compliance and enforcement activities would be more efficient and less costly.

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

Affected sources subject to the proposed rule may also be subject to other rules if they perform surface coating of products that are included in another source category. If you own or operate an affected source that is subject to the proposed rule and at the same affected source you also perform surface coating that is subject to any other NESHAP, you may choose to be subject to the requirements of the more stringent of the NESHAP for the entire surface coating affected source. If you choose to comply with the requirements of more stringent NESHAP and you demonstrate that the resulting HAP emission level (tpy) would be less than or equal to that achieved by complying separately with all applicable subparts, compliance with the more stringent NESHAP will constitute compliance with the requirements of the proposed rule. We specifically request comments on how monitoring, recordkeeping, and reporting requirements can be consolidated for sources that are subject to more than one rule.

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

#### HAP Emission Sources

Emissions from coating applications account for approximately 80 percent of the HAP emissions from miscellaneous metal parts and products surface coating operations. The remaining emissions are primarily from cleaning operations. 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 decorative coatings as well as adhesives) occur at several points. Coatings are most often applied either 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 as it is applied to the part and from the overspray. The coated part then passes through an open (flash-off) area where additional volatiles evaporate from the coating. Finally, the coated part 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 operations, where solvent is

used 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 vapor-laden air can occur during the filling of containers and can be caused by changes in temperature or barometric pressure, or by 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 miscellaneous metal parts and products include xylene, toluene, MEK, phenol, cresols/cresylic acid, 2-butoxyethanol, styrene, MIBK, ethyl benzene, and glycol ethers. These compounds account for approximately 90 percent of this category's nationwide organic HAP emissions.

Inorganic HAP

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

D. What Is the Affected Source?

We define an affected source as a stationary source, a group of stationary sources, or part of a stationary source to which a specific emission standard applies. The proposed standards define the affected source as the collection of

all operations associated with the surface coating of miscellaneous metal parts and products. These operations include preparation of a coating for application (e.g., mixing with thinners); surface preparation of the miscellaneous metal parts and products (including paint stripping for the purpose of preparing a substrate for the application of a coating); 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. The coating operation does not include the application of coatings using hand-held aerosol containers.

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

We are proposing to limit organic HAP emissions from each affected source as specified in the following tables. For each of the subcategories (defined in the proposed standards), the emission limit is expressed as the mass of HAP emissions per volume of coating solids used during each 12-month compliance period.

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

Coating type	Emission limit (kg HAP/liter of coating solids)	Emission limit (lbs HAP/gallon of coating solids)
General Use Sub-category:		
• General Use Coatings .....	0.23	1.94
• High Performance Coatings ...	3.30	27.54
Magnet Wire Sub-category .....	0.05	0.44
Rubber-to-Metal Sub-category .....	0.82	6.80

TABLE 3.—EMISSION LIMITS FOR EXISTING AFFECTED SOURCES

Coating type	Emission limit (kg HAP/liter of coating solids)	Emission limit (lbs HAP/gallon of coating solids)
General Use Sub-category:		
• General Use Coatings .....	0.31	2.60

TABLE 3.—EMISSION LIMITS FOR EXISTING AFFECTED SOURCES—Continued

Coating type	Emission limit (kg HAP/liter of coating solids)	Emission limit (lbs HAP/gallon of coating solids)
• High Performance Coatings ...	3.30	27.54
Magnet Wire Sub-category .....	0.12	1.00
Rubber-to-Metal Sub-category .....	4.50	37.70

The proposed standards contain provisions that allow you to calculate a facility-specific emission limit if your facility is in the general use subcategory and applies both general use and high performance coatings. The facility-specific limit is a weighted average emission limit based on the relative percentages of each coating type you use during the compliance period.

You can choose from several compliance options in the proposed rule to achieve the emission limits. You could comply by applying materials (coatings, thinners, and cleaning materials) that meet the emission limits, either individually or collectively, during each compliance period. You could also use a capture system and add-on control device to meet the emission limits. You could also comply by using 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 liquid-liquid material balance), the proposed operating limits would apply to you. These limits are site-specific parameter limits that you determine during the initial performance test of the system. For capture systems that are not permanent total enclosures, you would establish average volumetric flow rates or duct static pressure limits for each capture device (or enclosure) in each capture system. For capture systems that are permanent total enclosures, you would establish limits on average facial velocity or pressure drop across openings in the enclosure.

For thermal oxidizers, you would monitor the combustion temperature. For catalytic oxidizers, you would monitor the temperature immediately before and after the catalyst bed, or you would monitor the temperature before the catalyst bed and implement a site-specific inspection and maintenance

plan for the catalytic oxidizer. For carbon adsorbers for which you do not conduct a liquid-liquid material balance, you would monitor the carbon bed temperature and the amount of steam or nitrogen used to desorb the bed. For condensers, you would monitor the outlet gas temperature from the condenser.

The site-specific parameter limits that you establish must reflect operation of the capture system and control devices during a performance test that demonstrates achievement of the emission limits during representative operating conditions.

#### Work Practice Standards

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

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

#### Operations During Startup, Shutdown, or 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 (SSMP) during periods of startup, shutdown, or malfunction of the capture system and control device.

#### General Provisions

The NESHAP General Provisions (40 CFR part 63, subpart A) also would apply to you as indicated in the proposed standards. 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 standards refer to individual sections of the General Provisions to emphasize key sections that are relevant. However, unless specifically overridden in the proposed standards, all of the applicable General Provisions requirements would apply to you.

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

##### Compliance Dates

Existing affected sources would have to be in compliance with the final standards no later than [DATE 3 YEARS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE **Federal Register**]. New and reconstructed sources would have to be in compliance upon startup of the affected source or no later than [DATE OF PUBLICATION OF THE FINAL RULE IN THE **Federal Register**], whichever is later.

The proposed initial compliance period begins on the applicable compliance date and ends on the last day of the twelfth month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. We have defined "month" as a calendar month or a pre-specified period of 28 to 35 days to allow for flexibility at sources where data are based on a business accounting period. Being "in compliance" means that the owner or operator of the affected source meets the requirements to achieve the proposed emission limitations 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 the affected source does not meet the applicable limits and other requirements, it is out of compliance for the entire initial compliance period.

##### Emission Limits

There are several options for complying with the proposed emission limits, and the testing and initial compliance requirements vary accordingly.

#### Option 1: Compliance Based on Materials Used in the Affected Source

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

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

- For 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, and excluding water. If you choose this option, use Method 24 of 40 CFR part 60, appendix A.
- For volume fraction of coating solids, use either Equation 1 in § 63.3941 of the proposed rule, ASTM Method D2697-86 (1998), or ASTM Method D6093-97.

To demonstrate initial compliance based on the materials used, you would be required to demonstrate that either the organic HAP content of each coating meets the emission limits and that you use no organic HAP-containing thinners or cleaning materials, or 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 limits. For the latter option, you would be required to:

- Determine the quantity of each coating, thinner, and cleaning material used.
- Determine the mass of organic HAP in each coating, thinner, and cleaning material.
- Determine the volume fraction of coating solids for each coating.
- Calculate the total mass of organic HAP in all materials and the total volume of coating solids 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 regulated under 40 CFR part 262, 264, 265, or 266.

- 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.

#### Option 2: Compliance Based on Using a Capture System and Add-On Control Device

If you use a capture system and add-on control device other than a solvent recovery system for which you conduct a liquid-liquid material balance, your testing and initial compliance requirements are as follows:

- Conduct an initial performance test to determine the capture and control efficiencies of the equipment and to establish operating limits to be achieved on a continuous basis. The performance test would have to be completed 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 of coating solids for each coating used during the initial compliance period.

- Calculate the organic HAP emissions from 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 ratio of the total mass of HAP emissions 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.

If you use a capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances, you would determine both the efficiency of the capture system and the emission reduction efficiency of the control device. To determine the capture efficiency, you would either verify the presence of a 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 § 63.3965 of the proposed rule 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, 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.

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 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-coating solids ratio for the materials used. You would record the calculations and results and include them in your Notification of Compliance Status.

#### Operating Limits

As mentioned above, you would establish operating limits as part of the initial performance test of a capture system and control device other than a solvent recovery system for which you conduct liquid-liquid material balances. The operating limits are the minimum or maximum (as applicable) values achieved for capture systems and control devices during the most recent performance test that demonstrated compliance with the emission limits. 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 continuous parameter monitoring systems (CPMS) meet the requirements in § 63.3968 of the proposed rule. If you use control devices other than those identified in the proposed rule, you would submit the operating parameters to be monitored to the Administrator for approval. The authority to approve the parameters to be monitored is retained by EPA and is not delegated to States.

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

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



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

For each capture system that is not a permanent total enclosure, you would establish operating limits for gas volumetric flow rate or duct static pressure for each enclosure or capture device. The operating limit would be the average volumetric flow rate or duct static pressure during the performance test, to be met as a minimum. For each capture system that is a permanent total enclosure, the operating limit would require the average facial velocity of air through all natural draft openings to be at least 200 feet per minute or the pressure drop across the enclosure to be at least 0.007 inches water.

#### Work Practices

If you use the emission rate with add-on controls option, you would be required to develop and implement on an ongoing basis a work practice plan for minimizing organic HAP emissions from storage, mixing, material handling, and waste handling operations. You would have to make the plan available for inspection if the Administrator requests to see it.

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

#### Operations During Startup, Shutdown, or Malfunction

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

#### G. What Are the Continuous Compliance Provisions?

##### Emission Limits

If you demonstrate compliance with the proposed emission limits based on the materials used, you would demonstrate continuous compliance if, for each compliance period, the ratio of organic HAP to coating solids is less than or equal to the emission limits. A compliance period consists of 12 months. Each month after the end of the

initial compliance period is the end of a compliance period consisting of that month and the preceding 11 months. You would follow the same procedures for calculating the organic HAP to coating solids ratio that you used for the initial compliance period.

For each coating operation on which you use a capture system and control device other than solvent recovery for which you conduct a liquid-liquid material balance, you would use the continuous parameter monitoring results for the compliance period 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, you would assume the capture system and control device are achieving the same percent emission reduction efficiency as they did during the most recent performance test in which compliance was demonstrated. You would then apply this percent reduction to the total mass of organic HAP in materials used in controlled coating operations to determine the compliance period emission rate from those operations. If there were any deviations from the operating limits during the compliance period or any bypasses of the control device, you would account for them in the calculation of the compliance period 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 compliance period, you would use the liquid-liquid material balance to determine control efficiency. To determine the overall control efficiency, you must measure the amount of all materials used during each compliance period 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 compliance period, 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.

##### 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. If the continuous monitoring shows that the capture system and control device are operating outside the range of values established during the performance test,

you have deviated from the established operating limits.

If you operate a capture system and control device that allow emissions to bypass the control device, you would have to demonstrate that 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:

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

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

#### Work Practice Plan

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

#### 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 SSMP during periods of startup, shutdown, and malfunction of the capture system and control device.

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

You are required to comply with the applicable requirements in the NESHAP General Provisions, subpart A of 40 CFR part 63, as described in the proposed rule. The General Provisions notification requirements include: Initial notifications, notification of performance test if you are complying using a capture system and control device, notification of compliance status, and additional notifications required for affected sources with continuous monitoring systems. The

General Provisions also require certain records and periodic reports.

#### Initial Notifications

If the proposed standards apply to you, you must send a notification to the EPA Regional Office in the region where your facility is located and to your State agency, no later than 1 year after the effective date for existing sources and no later than 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. That report notifies us and your State agency that you have an existing facility that is subject to the proposed standards 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 proposed rule and apply for approval to construct or reconstruct.

#### Notification of Performance Test

If you demonstrate compliance by using a capture system and control device for which you do not conduct a liquid-liquid material balance, you would conduct a performance test. The performance test would be required no later than the compliance date for an existing affected source, and no later than 180 days after startup or 180 days after publication of the final rule, whichever is later, for a new or reconstructed source. You must notify us (or the delegated State or local agency) at least 60 calendar days before the performance test is scheduled to begin and submit a report of the performance test results no later than 60 days after the test 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. In the notification, you would certify whether the affected source has complied with the proposed standards, identify the option(s) you used to demonstrate initial compliance, summarize the data and calculations supporting the compliance demonstration, and describe how you will determine continuous compliance.

If your facility is subject to the proposed standards and to NESHAP for another surface coating source category and you have chosen to comply with the more stringent of the standards for the

entire facility, your notification would include a certification to that effect. You would also submit documentation that the resulting HAP emission levels are less than or equal to the level that would be achieved by complying with each applicable NESHAP.

If you elect to comply by using a capture system and control device for which you conduct performance tests, you must provide the results of the tests. Your notification would also include the measured range of each monitored parameter and the operating limits established during the performance test, and information showing whether the source has complied with its operating limits during the initial compliance period.

#### Recordkeeping Requirements

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

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

- Organic HAP content, volatile matter content, coating solids content, and quantity of the coatings, thinners, and cleaning materials used during each compliance period; and
- 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 SSMP;
- All information necessary to demonstrate conformance with the affected source's SSMP 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 limits, operating limits, or work practice standards.

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

If you use a capture system and control device to reduce HAP emissions, you would have to make your SSMP 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 proposed standards. If you revise the plan, you would need to keep the previous superseded 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 include them in the report as follows:

- Report each deviation from the emission limitations that apply to you.
- If you are complying by using a thermal oxidizer, report all times when a consecutive 3-hour average temperature is below the operating limit.
- If you are complying by using a catalytic oxidizer, report all times when a consecutive 3-hour average temperature difference across the catalyst bed is below the operating limit and also report all times when a 3-hour average 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 the operating limit and also report all times when the carbon bed temperature is more than the operating limit.

- 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 immediate reports required by § 63.10(d)(5)(ii) of the General Provisions. You must also 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).

### III. Rationale for Selecting the Proposed Standards

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

The surface coating of miscellaneous metal parts and products 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 at least 9.7 Mg (10 tons) of any one HAP or at least 22.7 Mg (25 tons) of any combination of HAP annually. The proposed rule would control HAP emissions from both new and existing major sources. Area sources are not being regulated under the proposed rule.

The surface coating of miscellaneous metal parts and products as described in

the listing includes any facility engaged in the surface coating of miscellaneous metal parts or products. We have used product lists contained in the SIC and NAICS code descriptions to describe examples of the vast array of miscellaneous metal parts and products.

We intend the source category to include facilities for which the surface coating of miscellaneous metal parts and products is either their principal activity or an integral part of a production process that 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 operation and applicable emission control techniques, are included in the source category.

The source category does not include research or laboratory facilities; janitorial, building, and facility maintenance operations; or hobby shops where surface coating is performed for noncommercial purposes.

#### 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 miscellaneous metal parts and products include xylene, toluene, MEK, phenol, cresols/cresylic acid, 2-butoxyethanol, styrene, MIBK, ethyl benzene, and glycol ethers. These compounds account for approximately 90 percent of this category's nationwide organic HAP emissions. However, many other organic HAP are used, or can be used, in miscellaneous metal parts and products coatings, thinners, and cleaning materials. Therefore, the proposed rule would regulate emissions of all organic HAP.

##### Inorganic HAP

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

inorganic HAP from this source category warrant Federal rulemaking.

#### 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 establish 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 63.2) and provide that new source MACT applies when construction or reconstruction of an affected source occurs (40 CFR 63.5). 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 Affected Source

The affected source for the proposed standards is broadly defined to include all operations associated with the coating of miscellaneous metal parts and products and the cleaning of product substrates or coating operation equipment. These operations include storage and mixing of coatings and other materials; surface preparation of the miscellaneous metal parts and products 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 amount of HAP that are emitted. Cleaning and coating application, flash-off, and curing/drying operations account for the majority of HAP emissions at miscellaneous metal parts and products surface coating operations. These operations are included 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 depends on the type of mixing and the type of storage container and the work practices used 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 affects 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 miscellaneous metal parts and products surface coating operations selected for rulemaking, 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.

After we identify the specific source categories or subcategories of sources to regulate under section 112 of the CAA, we must develop emission standards for each category and subcategory. Section 112(d)(3) establishes a minimum baseline or "floor" for standards. For new 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. 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 five sources for categories or subcategories with fewer than 30 sources).

The miscellaneous metal parts and products surface coating source category includes facilities that coat metal parts and products which are not applicable to other specific surface coating MACT source categories. This source category comprises numerous diverse operations that apply surface coatings to metal parts and products including, but not limited to, railroad cars, medical equipment, electronic equipment, wheelbarrows, magnet wire, heavy duty trucks, hardware, power tools, pipes, structural steel, sporting goods, lawn mowers, bicycles, auto parts, musical instruments, steel drums, army tanks, and industrial machinery. In addition, a wide variety of coating technologies and application methods are employed across all these industry segments. Nationwide, there are thousands of facilities involved in coating of miscellaneous metal parts and products, with an estimated 1,500 or more being classified as major sources. Because of the diversity of the products coated and the coating technologies and application methods employed, identification of the top performing facilities in this category is inherently difficult, especially since the control techniques that make these facilities the top performers must be transferrable to other facilities in the category. Consequently, it has been necessary to employ innovation in developing a regulatory approach for this category that provides significant emission reductions while being achievable across the source category.

There are no existing Federal or State regulations requiring control of HAP emissions from this category. Reasonably available control technology (RACT) requirements have been in place for reduction of volatile organic compound (VOC) emissions from this category since the late 1970's and may have resulted in some degree of coincidental reductions in HAP emissions. However, since the RACT requirements generally apply only to facilities located in ozone nonattainment areas, and many States have applicability thresholds for the RACT requirements, there are a great number of unregulated miscellaneous metal parts and products facilities remaining.

To gather data to support the development of the proposed rule, we utilized written requests for information submitted to owners and operators of facilities within the source category. The results of a two-page screening survey sent to approximately 3,000 facilities were used to identify major and synthetic minor sources that perform coating operations on miscellaneous metal parts and products.

This list was augmented with names of facilities provided by trade associations and resulted in a list of 312 corporate owners to which a subsequent, more detailed survey was distributed.

The detailed survey resulted in responses from 639 major and synthetic minor sources. Of the facilities responding to the survey, only 332 submitted data of sufficient quality to perform some degree of analysis on coating material usage.

We explored various approaches to determining the MACT floor and eventual regulatory strategy based on the data obtained from our data gathering efforts. From the outset, the various facilities were grouped into industry "segments" based on the type of products coated. This was done to identify trends among the segments and to indicate whether one or more segments were influencing the floor determination. It also enabled the stakeholders to more easily check the results for their respective industry segments and give us feedback on the apparent accuracy of the information reported.

One approach considered in an effort to minimize the effect of the extreme diversity of the miscellaneous metal parts and products source category was to develop MACT floors using a "coating category" approach. In the coating category approach, the specific industry and the part or product coated had no bearing on the analysis. For this analysis, coatings would be grouped according to their type (primers, color coats, top coats, clear coats, adhesives, etc.) along with the thinners and additives specified for their use. They could be further categorized by resin type (acrylic, alkyd, epoxy, polyurethane, etc.). Then, the HAP content "as applied" (*i.e.*, after thinning and mixing of additives) could be determined and the average of the best coatings in each category could represent the MACT floor for that coating category. This approach is similar to the coating category approaches used in the wood furniture manufacturing NESHAP (40 CFR part 63, subpart JJ) and the shipbuilding and ship repair NESHAP (40 CFR part 63, subpart II). However, it is more complex than those since the miscellaneous metal parts and products category comprises a vast array of coatings and is further broken down by resin type.

A serious drawback to the detailed coating category approach was that the analysis depended on high quality survey responses that would allow us to correlate coating type with resin type and HAP content for a multitude of combinations. Unfortunately, the survey

data did not provide the level of information required to enable us to perform a meaningful analysis of the coating categories.

As an alternative to the detailed coating category approach, we attempted an analysis of each facility based on emissions reported from the various coating operations. In many cases, respondents reported HAP emissions for individual coating lines and other emission points as requested. In many others, however, such estimates were not provided. In those cases, we used available survey information on materials used to derive emission estimates for the various emission points at the facility. The combined reported and derived emission estimates were used in conjunction with material data reported to develop a facilitywide ratio of HAP emitted per volume of solids used. This "one number" approach accounted for all coating-related emissions (painting, mixing, thinning, cleaning, etc.) and eliminated the need to separately account for thinning and cleaning solvents, paint additives, etc.

Although the "one number" approach is relatively simple, allows flexibility, and accounts for emissions from all operations within the boundaries of the coating operation, we questioned the appropriateness of using a combination of bases to estimate emissions. To check for potential problems, we examined the emissions and materials data reported for several facilities. In many cases, the emissions reported could not be reconciled with the HAP content of the materials used. In some cases, the emissions were reported to be greater than the total HAP content of all materials reported. To avoid basing the MACT floor and eventual rules on questionable, unreconcilable data, we decided to abandon the "emissions" approach and rely solely on the reported HAP content of materials to determine the overall "one number" ratio of pounds HAP to gallons (gal) solids.

Using material formulation data reported in the survey, the volatile HAP content and the solids content were both summed across all materials, and a ratio of pounds (lb) HAP used per gal solids used was calculated for each facility. This number was modified to reflect any reductions from add-on controls or from waste materials collected and shipped offsite. Solvents recycled onsite were not subtracted, since they would be reused within the boundaries of the coating operation and would not affect the material balance. Recycled materials coming into the operation from offsite were counted the same as new materials purchased.

Once the overall HAP-to-solids ratio was determined for each facility, the facilities were ranked in ascending order based on this ratio (*i.e.*, ranked best performing to worst performing). The top 12 percent of these facilities were identified and their average ratio represented the MACT floor for the entire source category. A similar procedure was performed on the facilities in 16 individual industry segments to determine the effect certain segments may have on the floor calculation and to qualitatively assess how individual segments may be affected by rules based on the floor. The floor calculation based on all facilities (*i.e.*, no segmentation) yielded an average ratio of less than 0.1 lb HAP per gal of coating solids. The floor calculations for individual segments yielded averages ranging from zero lb HAP/gal solids (auto parts, structural steel) to very high averages of 13 lb HAP/gal solids (magnet wire) and 58 lb HAP/gal solids (rubber-to-metal products). This variation from segment to segment indicated that a single floor, with no subcategorization, would not be representative of all sources in the source category. A tentative decision was made to divide the source category into at least three subcategories (magnet wire, rubber-to-metal, and all other facilities grouped into a "general use" subcategory) and possibly more depending on the level of homogeneity that could be achieved within each subcategory. In order for the MACT floor to be calculated based on similar sources within a subcategory, the makeup of the subcategory must be homogeneous in terms of processes, application methods, coating types, and applicable HAP control technologies. Too much diversity (with respect to products coated, coating performance requirements, *etc.*) within a subcategory could result in an inappropriate MACT floor since the top-performing facilities (and the specific products they coat) may not be representative of the subcategory. After careful review of the survey results from individual facilities and consultation with several stakeholder groups, we concluded that the diversity within the various industry segments of the general use subcategories remained extremely broad. We concluded that some other means of disaggregating the miscellaneous metal parts and products general use subcategory was needed.

Because of this lack of homogeneity, we attempted to regroup the products coated within the general use subcategory into a different set of potential subcategories. For example,

instead of "automobile parts," "large trucks and buses," "recreational vehicles," "heavy equipment," and "rail transportation," the products within these industry segments were regrouped as "vehicle finishing," "vehicle body parts," "vehicle mechanical parts," "engines and engine parts," and "electrical parts" in order to group more homogeneous products and performance requirements within the subcategory. After further analysis of the data and discussions with stakeholders associated with these existing segments and potential subcategories, we concluded that the top performing facilities within the newly regrouped potential subcategories were still unrepresentative.

We concluded at this point that the most frequently used approaches to determining a MACT floor for a source category were unlikely to be applicable to the miscellaneous metal parts and products general use subcategory. An innovative approach was needed to provide reasonable HAP emission reductions while maintaining a realistic expectation that the control measures imposed could, in fact, be achievable across this diverse collection of industries. Instead of determining the MACT floor directly from facility emissions or materials information, we decided to use a combination of State VOC limits and locations of specific miscellaneous metal parts and products facilities to establish the MACT floor using the VOC limits as a surrogate for HAP.

The miscellaneous metal parts and products database contains 321 facilities (332 facilities with usable materials information, minus the 11 magnet wire and rubber-to-metal facilities) that are major sources or synthetic minor sources. Using information from the survey, we identified the State in which each facility is located. A review of existing State and local VOC requirements showed that the most stringent limits are those imposed by the various air quality management districts in California. For most coating types, this limit is 2.80 lb VOC per gal of coating (as applied), less water and exempt (non-VOC) solvents. The State of Louisiana imposes a VOC limit of 3.00 lb VOC/gal coating as applied, less water and exempt solvents. The remainder of the States require the 3.50 lb VOC/gal coating limit presented in the Federal control techniques guidelines (CTG) document (Massachusetts and North Carolina express their limits as 6.70 lb VOC/gal solids, which is equivalent to 3.50 lb VOC/gal coating, less water and exempt solvents). The limits discussed here

apply to most coating types (general use coatings). Certain specialty coatings are subject to different VOC limits under the California rules and will be addressed in later paragraphs.

Knowing the State VOC limits and the locations of the miscellaneous metal parts and products facilities in the database, we were able to determine what the average State VOC limit would be for the top 12 percent of the industry. From a total of 321 facilities, 39 facilities comprised the top 12 percent as follows: California—9 facilities @ 2.80 lb VOC/gal; Louisiana—no facilities @ 3.00 lb VOC/gal; and other States—30 facilities @ 3.50 lb VOC/gal. Using these limits and the facilities subject to them, the average State limit for the top 12 percent was calculated to be 3.30 lb VOC/gal coating, less water and exempt solvents, or 6.00 lb VOC/gal solids. Similarly, the best controlled similar sources would be those subject to the California limit of 2.80 lb VOC/gal coating, or 4.50 lb VOC/gal solids.

In order to use the average VOC limit as a surrogate for HAP emissions, we developed a correction factor that relates VOC emissions to HAP emissions within the miscellaneous metal parts and products category. To develop this factor, we calculated the average HAP-to-VOC ratio for all material usage reported by the facilities in the miscellaneous metal parts and products database. By dividing the total amount of HAP reported by the total amount of VOC reported across the miscellaneous metal parts and products category (except for magnet wire and rubber-to-metal products), we determined that the average HAP-to-VOC ratio of materials used is 43 percent.

Using this approach, the MACT floor for existing sources was determined by multiplying the average of the top 12 percent (6.00 lb VOC/gal solids) by the correction factor (43 lb HAP/100 lb VOC). This results in an existing source MACT floor of 2.60 lb HAP/gal solids. A similar calculation using the California limit results in a new source MACT floor of 1.90 lb HAP/gal solids. As mentioned earlier, these floor determinations apply to most coatings (those now referred to as "general use" coatings) used within the miscellaneous metal parts and products category. General use coatings are any coatings that do not meet the definitions of the specialty coating categories that are addressed in the following paragraphs.

For most industries within the general use subcategory, the coating type used will be defined as "general use coatings" and will be represented by the MACT floor values described above.

Certain specialty coatings that are used by some facilities within the general use subcategory have been identified as "high performance coatings." These coatings are not used in any one industry exclusively, but may be used in varying amounts in many different industries. This coating type includes coatings used in severe conditions such as high temperatures or exposure to a variety of harsh chemicals. Certain architectural coatings are also included in this coating type. The proposed rule contains specific definitions that must be met for coatings to be considered high performance coatings. The new and existing source MACT floor for these types of coatings was developed from California's 6.20 lbs VOC/gal of coating provisions for specialty coatings. This limit was used for both the new and existing source MACT floors because it is the most stringent limit found specifically for these coating types, and because it is currently applicable to facilities in California. The HAP-to-VOC ratio of these coatings, based on information received from industry, is on average about 70 percent. The MACT floor for these coatings is, therefore, 27.54 lbs HAP/gal coating solids (3.30 kg HAP/liter coating solids).

The rubber-to-metal products industry segment is considered as a separate subcategory because acceptable low HAP coatings have not been demonstrated for many applications within this industry. Because there are less than 30 facilities within this subcategory, the MACT floor was based on data from the five best performing facilities for which we have data. An analysis of the HAP data provided by the industry in the survey responses lead to the development of a new source floor of 6.80 lbs HAP/gal coating solids (0.82 kg HAP/liter coating solids) and an existing source floor of 37.70 lbs HAP/gal coating solids (4.50 kg HAP/liter coating solids).

Magnet wire coating is also considered as a separate subcategory for which specific MACT floor values were determined. The magnet wire industry is unique within the source category because of the design of the curing ovens used in the industry. These ovens are designed to utilize volatile organics in the exhaust gas stream as a supplemental fuel. They typically operate at temperatures that achieve high volatile organic destruction efficiencies. Based on the HAP data provided by the best performing five of the seven facilities for which we have data (there are less than 30 facilities in the subcategory), the new source MACT floor is 0.44 lbs HAP/gal coating solids (0.05 kg HAP/liter coating solids). The

MACT floor for existing facilities is 1.00 lb HAP/gal coating solids (0.12 kg HAP/liter coating solids). These values include a factor of 0.27 lb HAP/gal coating solids (0.03 kg HAP/liter coating solids) to account for emissions from cleaning operations. This factor was necessary because the emissions from most cleaning operations that employ solvents containing HAP are not captured and controlled by the ovens.

After the floors have been determined for new and existing sources in a source category or subcategory, we must set emission standards that are technically achievable and no less stringent than the floors. Such standards must then be met by all sources within the category or subcategory. We identify and consider any reasonable regulatory alternatives that are "beyond-the-floor," taking into account emissions reductions, cost, non-air 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 are the use of powder coatings as an alternative to HAP-containing liquid coatings; the use of liquid coatings that have a very low, or no, organic HAP content as an alternative to higher HAP content liquid coatings; and use of add-on capture systems and control devices.

Information indicates that several miscellaneous metal parts and products surface coating facilities have converted to using only powder coatings. Such facilities typically produce a single type of product (such as lawn and garden equipment), do not require unusual finishes, and use a small number of colors. Many miscellaneous metal parts and products surface coating facilities, however, manufacture more than one product and often use a wide array of colors. 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, it is not universally applicable in the miscellaneous metal parts and products industry and was, therefore, rejected as a beyond-the-floor option for existing or new sources.

Lower organic HAP liquid coatings fall into two primary categories. The

most common category is coatings formulated with solvents that are not organic HAP (but may be VOC). The second category is those coatings that result from alternate technologies such as ultraviolet (UV)-curable coatings and electron beam (EB)-curable coatings. These coatings do not employ organic HAP or VOC to keep the pigment and other components of the coating in solution until curing. Therefore, organic HAP emissions are very small.

These lower organic HAP coatings are currently in production use in some industries, but their applicability in many other industries is limited. Given the limited applicability of UV-curable and EB-curable coatings, we do not believe it is feasible to require the use of these coatings and rejected them as a beyond-the-floor option for existing or new sources.

It is technically feasible to reduce emissions from affected sources by at least 95 percent through the use of capture systems and add-on control devices. However, the estimated cost of a permanent total enclosure and a control device, such as an oxidizer, for facilities in this source category could be as much as \$1 million.

Without having information on the benefits that would be achieved by further reducing emissions beyond-the-floor, we determined that the additional emissions reductions that could be achieved do not warrant the costs that each existing and new source could incur by using add-on controls. Therefore, we are not requiring beyond-the-floor levels of emissions reductions

at this time. After implementation of these standards, we will evaluate the health and environmental risks that may be posed as a result of exposure to emissions from the miscellaneous metal parts and products surface coating source category. At that time, we will determine whether the additional costs are warranted, in light of the available risk information.

For existing sources, we based the proposed standards on the existing source MACT floor. As described earlier, we determined that beyond-the-floor options were either not technically feasible or economically justified for all existing sources. For the same reasons, we based the proposed standards for new sources on the new source MACT floor.

The MACT levels of control for new and existing sources can be achieved in several different ways. Many sources would be able to use lower-HAP coatings, although they may not be available to meet the needs of every source. If a source is also using cleaning materials that contain organic HAP, then it may be able to switch to lower-HAP or non-HAP cleaning materials, which are widely available, to reduce the sourcewide organic HAP emissions rate to the MACT level. Other available options are the use of powder coatings or capture systems and add-on control devices to reduce emissions.

We note here that our assumption 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 that assumption because the industry survey responses provided little information as to the amount of organic HAP recovered and recycled or treated and disposed. We, therefore, concluded that this practice may not be common within the industry. We recognize, however, that some facilities may conduct such activities and should be allowed to account for such activities in determining their emissions. Thus, the proposed rule allows you to reduce the organic HAP emissions by the amount of any organic HAP contained in waste treated or disposed at a hazardous waste treatment, storage, and disposal facility that is regulated under 40 CFR part 262, 264, 265, or 266.

Because it is expected that some facilities in the general use subcategory may use both general use and high performance coating types, an equation was developed in the proposed NESHAP that allows a facility-specific emission limit to be calculated based on the relative amounts of each of the coating types used. The emission limit for each facility is a weighted average calculated using the MACT limit and the percentage of solids for each coating type. For example, if an existing facility applies 10,000 gal of solids of general use coatings and 5,000 gal of solids of high performance coatings, the facility's emission limit would be calculated as follows:

Limit =

$$\frac{(2.60)*(10,000) + (27.54)*(5,000)}{(10,000) + (5,000)} = 10.9 \text{ lbs HAP/gal solids.}$$

For facilities that use only general use or only high performance coatings, the MACT floor emission limit for the entire affected facility is the value specified for that coating type.

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

Numerical emission standards are required by section 112(h) of the CAA unless we can justify 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.

We selected the format of the standards to be mass of organic HAP per volume of coating solids. The performance-based nature of this proposed format would allow the owners and operators of miscellaneous metal parts and products coating

operations flexibility in choosing any combination of means to comply with the emission limits. Options for complying with the standards include coating reformulation, use of lower-HAP or non-HAP materials, solvent elimination, work practices, and add-on control devices.

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 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 miscellaneous metal parts and products is generally consistent) and, therefore, provides an equitable basis for all

coatings, regardless of differences in coating densities.

Other choices for the format of the proposed 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, solvents, or cleaning materials. As it is not our intent to limit a facility's production under the proposed standards, we rejected a usage limit. We also rejected a never-to-be-exceeded limit as the proposed standards allow averaging of HAP emissions from the materials used during the compliance period.

#### *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: Coatings with low- or no-organic-HAP; an overall organic HAP emission rate from all coatings, thinners, and cleaning materials that is less than the applicable emission limit; or 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 of 40 CFR part 63, appendix A, 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 of 40 CFR part 60, appendix A, 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 coating industries with Method 24 as the compliance method. We have not identified any other methods that provide advantages over Method 24 for use in the proposed standards.

The proposed requirements for determining volume fraction of coating solids would allow you to choose between obtaining the information for each coating from the supplier (or manufacturer) or measuring the volume with either ASTM Method D2697-86 (1998) or ASTM Method D6093-97.

#### Overall Organic HAP Emission Rate

To demonstrate initial compliance using this option, you would calculate the organic HAP emission rate for one or more coating operations in the 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 determine 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 liquid-liquid material balance, you would be required to conduct an initial performance test of the system to determine its overall control efficiency.

For a solvent recovery system for which you conduct a liquid-liquid material balance, you would determine the quantity of volatile matter applied and the quantity recovered during the initial compliance period to determine its overall control efficiency. For both cases, the overall control efficiency would be combined with the mass of organic HAP in the coatings and other materials used to calculate the compliance period HAP emission rate in kilograms (kg) HAP/liter of coating solids. If you conduct a performance test, you would also determine parameter operating limits during the test. The test methods that the proposed standards would require for the performance test have been required 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 limits 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 limits 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 limits are established during the initial or most recent performance test that demonstrates compliance. These values are your operating limits for the capture system and control device.

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

To demonstrate continuous compliance with the applicable

emission limitations, you would also need records of the quantity of coatings and other materials used and the data and calculations supporting your determination of their organic HAP content. If you conduct liquid-liquid material balances, you would need records of the quantity of volatile matter used and the quantity recovered by the solvent recovery system during each compliance period.

#### 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 M. 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 that 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. Some sources may need the time to purchase and install emission capture and control systems. In such cases, you would need to obtain a permit for the use of add-on controls, which will require time for approval from the permitting authority.

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 proposed standards would have on miscellaneous metal parts and products surface coating operations. Five 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 estimate impacts for each actual facility.

A variety of compliance methods are available to the industry to meet the proposed emission limits. 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 for existing sources would be low-HAP content liquid coatings (coatings with HAP contents at or below the emission limits). Powder coatings, no-HAP cleaning materials, and add-on capture and control systems would likely be used by existing sources, but to a lesser extent. Various combinations of these methods may be used. New sources are expected to use a combination of powder coatings, low-HAP coatings, and no-HAP cleaning materials.

For the purpose of assessing impacts, we assumed that all existing sources would convert to liquid coatings and thinners with lower-HAP content than presently used and no-HAP cleaning materials. We assumed that new sources would use either powder coatings or lower-HAP coatings and no-HAP cleaning materials.

We first estimated the impacts of the proposed emission limits on the five 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 plant size. We estimated that there are 1,500 existing major source facilities nationwide, and that an additional 45 new facilities would become affected sources each year.

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

For existing major sources, we estimated that compliance with the proposed emission limits would result in reductions of nationwide organic HAP emissions of 25,822 tpy. This represents a reduction of about 48 percent from the baseline organic HAP emissions of 53,869 tpy.

For the purpose of estimating the impacts of the proposed standards on new sources, we estimated the

percentage of new facilities that would, in the absence of the standards, emit HAP at levels that would exceed the proposed standards. For new sources, we believe that many will use coating technologies that are considered to be "state-of-the-art" coatings (e.g., powder coatings and low-HAP liquid coatings). However, we assumed for the impacts estimation that the same percentage of both new and existing facilities would be noncomplying at baseline conditions. The baseline emission rate for these noncomplying facilities was assumed to be the same as that determined for the existing source model plants. Using these assumptions, we have estimated the nationwide HAP reductions resulting from new facilities complying with the proposed standards would be about 803 tpy from the 45 new sources that would become subject to the rule each year.

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

We have estimated the costs related to complying with the emission limitations and meeting the monitoring, recordkeeping, and reporting requirements. The costs to comply with the emission limitations include the increased cost of reformulated low-HAP coating materials, as well as any capital expenditures that would be required to facilitate the use of these materials. Alternatively, facilities could choose to purchase, install, and operate capture systems and add-on control devices. We have assumed for this analysis that all affected facilities will comply through the use of reformulated coatings, thinners, and cleaning materials, and that these materials can be utilized without the need for capital expenditures. Annual costs for meeting the monitoring, recordkeeping, and reporting requirements of the proposed rule have also been included.

#### *Existing Sources*

To comply with the proposed standards, existing facilities will likely use reformulated coatings, thinners, and cleaning materials. Compliance costs were estimated to be the incremental cost difference between the materials currently used and the complying materials. Estimates of cost impacts were based on five model plants that were developed to represent the range of sizes and coating materials found throughout the industry. Each model plant was assumed to comply with the proposed standards by switching to non-HAP adhesives, surface preparation materials and cleaning materials and reducing the HAP content of the coatings and thinners. The annual incremental cost of the reformulated

raw materials ranged from approximately \$2,635 for model plant 1, representing the segment of industry with the lowest coating solids usage, to \$114,540 for model plant 5, representing the segment of industry that uses over 75,000 gal of coating solids. The nationwide cost impact was estimated for each industry segment by multiplying the annual costs for each model plant by the number of facilities represented by that model plant. A total nationwide cost impact associated with material usage was estimated by summing the nationwide costs for each of the five industry segments. In addition, we included estimates for monitoring, recordkeeping, and reporting costs for all 1,500 existing affected sources.

We estimate total nationwide annual costs in the fifth year to comply with the proposed emission limits to be \$47.5 million for existing sources. These costs include approximately \$8.9 million for direct costs associated with material usage and \$38.6 million for recordkeeping and reporting.

#### *New Sources*

We estimate the number of new major sources to be 45 per year, based on an average growth rate of 3 percent per year. Applying the same assumptions for estimating costs that were used for existing sources results in an estimate of the fifth year costs for new sources of about \$9.8 million. Of this total, \$3.6 million represents the incremental costs of low-HAP materials, and \$6.2 million represents the costs for recordkeeping and reporting.

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

We performed an economic impact analysis (EIA) to provide an estimate of the impacts on facilities, firms, and markets within this source category. Given the wide diversity of products that will be affected by the proposed standards, EPA relied upon estimated compliance costs and publicly available financial data on affected firms to determine these impacts. In general, we expect the economic impacts of the proposed standards to be minimal, with little or no change in market prices or production. Therefore, no adverse impact will occur for those industries that consume coated metal parts such as building and construction, transportation equipment and vehicle parts, and other industrial and consumer products.

Based on the industry survey responses, EPA was able to identify 176 companies that owned 321 potentially affected facilities within this source category. Of this total, we obtained sales

data for 147 companies and net income data for 76 companies. For those companies with sales data, the EIA indicates that these regulatory costs average less than 0.1 percent of company sales with a range from zero to 1.25 percent. For those companies with net income data, these regulatory costs average 0.2 percent of company net income with a range from zero to 3.6 percent. This analysis indicates that the cost of the proposed standards should not cause producers to cease or significantly alter their current operations. Hence, no firms or facilities are expected to be at risk of closure because of the proposed standards. For more information, consult the docket for this project.

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

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

Because new sources are expected to comply with the proposed standards through the use of low-HAP coating technologies rather than add-on control devices, there would be no significant change in energy usage or waste production.

### **V. Administrative Requirements**

#### *A. Executive Order 12866, Regulatory Planning and Review*

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

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

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

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

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

Pursuant to the terms of Executive Order 12866, it has been determined that the proposed rule is not a "significant regulatory action" because none of the listed criteria apply to this action. Consequently, this action was not submitted to OMB for review under Executive Order 12866.

#### *B. Executive Order 13132, Federalism*

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

Under section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. The EPA also may not issue a regulation that has federalism implications and that preempts State law, unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

The proposed rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. Pursuant to the terms of Executive Order 13132, it has been determined that the proposed rule does not have "federalism implications" because it does not meet the necessary criteria. Thus, the requirements of

section 6 of the Executive Order do not apply to the proposed rule. Although Section 6 of Executive Order 13132 does not apply to the proposed rule, EPA did consult with State and local officials to enable them to provide timely input in the development of the proposed rule.

#### *C. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments*

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." "Policies that have tribal implications" is defined in the Executive Order to include regulations that have "substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes."

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

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

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

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the

analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. The proposed rule is not subject to Executive Order 13045 because it does not establish environmental standards based on an assessment of health or safety risks. No children's risk analysis was performed because no alternative technologies exist that would provide greater stringency at a reasonable cost. Furthermore, the proposed rule has been determined not to be "economically significant" as defined under Executive Order 12866.

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

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

*F. Unfunded Mandates Reform Act of 1995*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under Section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in 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 EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of Section 205 do not apply when they are inconsistent with applicable law. Moreover, Section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under Section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling

officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that the proposed rule does not contain a Federal mandate that may result in expenditures of \$100 million or more to State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. The maximum total annual cost of the proposed rule for any 1 year has been estimated to be about \$57.5 million. Thus, today's proposed rule is not subject to the requirements of sections 202 and 205 of the UMRA. In addition, EPA has determined that the proposed rule contains no regulatory requirements that might significantly or uniquely affect small governments because it contains no requirements that apply to such governments or impose obligations upon them. Therefore, today's proposed rule is not subject to the requirements of Section 203 of the UMRA.

*G. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601, et seq.*

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's proposed rule on small entities, small entity is defined as: (1) A small business according to Small Business Administration (SBA) size standards ranging from 100–1,000 employees or less than \$5 million in annual sales; (2) a small governmental jurisdiction that is a government of a city, town, county, 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. It should be noted that companies affected by this proposed rule, and the small business definition applied to each industry by NAICS code is that listed in the Small Business Administration size standards (13 CFR part 121).

For purposes of assessing the impacts of today's proposed rule on small entities, EPA conducted an assessment of the proposed standards on small businesses within the miscellaneous metal parts source category. Based on SBA size definitions and reported sales and employment data, EPA's survey identified 29 of the 147 companies owning major source facilities as small businesses. The average (median) total annual compliance cost is projected to be \$59,000 (\$36,000) per small company. Under the proposed standards, the average (median) annual compliance cost share of sales for small businesses was only 0.25 (0.04) percent with a range of zero to 1.25 percent. After considering the economic impact of today's proposed rule on small entities, EPA certifies that this action will not have a significant economic impact on a substantial number of small entities.

Although the proposed rule will not have a significant economic impact on a substantial number of small entities, EPA has nonetheless worked aggressively to minimize the impact of the proposed rule on small entities, consistent with our obligations under the CAA. 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-or no-HAP coatings, thinners, and cleaning materials (*i.e.*, pollution prevention) that meet the proposed standards rather than being required to purchase add-on control systems. The low-or no-HAP option can be demonstrated with minimum burden by using already-maintained purchase and usage records. No testing of materials would be required as the facility owner could show that their coatings meet the emission limits by providing formulation data supplied by the manufacturer.

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

Furthermore, we are proposing the minimum monitoring, recordkeeping,

and reporting requirements needed for enforcement and compliance assurance.

We continue to be interested in the potential impacts of the proposed standards on small entities and welcome comments on issues related to such impacts. For more information, consult the docket for this rulemaking.

#### H. Paperwork Reduction Act

The information collection requirements in the proposed rule has been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501, *et seq.* An Information Collection Request (ICR) document has been prepared by EPA (ICR No. 2056.01) and a copy may be obtained from Sandy Farmer by mail at the Collection Strategies Division (2822), U.S. EPA, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, by e-mail 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 collection requirements are not effective until OMB approves them. The information collection requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to national emission standards. These recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to Agency policies set forth in 40 CFR part 2, subpart B.

The 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 12-month compliance period, mass fraction of organic HAP, density, and, for coatings only, volume fraction of coating solids.

If an add-on control device is used, records 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 12-month 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 5th year after the effective date of the promulgated rule is estimated to be 824,343 labor hours at a cost of \$44.76 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.

Comments are requested on the EPA's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques. By U.S. Postal Service, send comments on the ICR to the Director, Collection Strategies Division (2822), U.S. EPA, 1200 Pennsylvania Ave., NW, Washington, DC 20460; or by courier, send comments on the ICR to the Director, Collection Strategies Division, U.S. EPA (2822), 401 M Street, SW, Room 925H, West Tower, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th St., NW, Washington, DC 20503, marked "Attention: Desk Officer for EPA." Include the ICR number in any correspondence. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after August 13, 2002, a comment to OMB is best assured of having its full effect if OMB receives it by September 12, 2002. The final rule will respond to any OMB or public comments on the information collection requirements contained in the proposal.

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

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Pub. L. No. 104-

113, § 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in its 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, and business practices) that are developed or adopted by voluntary consensus bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when EPA does not use available and applicable VCS.

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

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

Six VCS: ASTM D1475-98, ASTM D2369-98, ASTM D3792-99, ASTM D4017-96a, ASTM D4457-85 (Reapproved 1991), and ASTM D5403-93, are already incorporated by reference (IBR) in EPA Method 24. In addition, we are separately specifying the use of ASTM D1475-98 for measuring the density of individual coating components, such as organic solvents.

Five VCS: ASTM D1979-97, ASTM D3432-89, ASTM D4747-87, ASTM D4827-93, and ASTM PS 9-94 are IBR in EPA Method 311.

In addition to the VCS we propose to use in the rule, the search for emissions measurement procedures identified 14 other VCS. We determined that 11 of these 14 standards identified for measuring emissions of the HAP or

surrogate subject to emission standards in the proposed rule were impractical alternatives to EPA test methods for the purposes of the proposed rule. Therefore, the EPA does not intend to adopt these standards. (See docket A-97-34 for further information on the methods.)

Three of the 14 VCS identified in this search were not available at the time the review was conducted for the purposes of the proposed rule because they are under development by a voluntary consensus body: ASME/BSR MFC 13M, "Flow Measurement by Velocity Traverse," for EPA Method 2 (and possibly 1); ASME/BSR MFC 12M, "Flow in Closed Conduits Using Multiport Averaging Pitot Primary Flowmeters," for EPA Method 2; and ISO/DIS 12039, "Stationary Source Emissions—Determination of Carbon Monoxide, Carbon Dioxide, and Oxygen—Automated Methods," for EPA Method 3A. While we are not including these three VCS in today's proposal, EPA will consider the standards when final.

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

Sections 63.3941, 63.3965, 63.3966, and Table 2 to subpart MMMM of the proposed standards list EPA testing methods included in the proposed rule. Under the NESHAP General Provisions, 40 CFR 63.8, subpart A, a source may apply to EPA for permission to use alternative monitoring in place of any EPA testing methods.

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

Environmental protection, Administrative practice and procedure, Air pollution control, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: June 5, 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 MMMM to read as follows:

#### **Subpart MMMM—National Emission Standards for Hazardous Air Pollutants: Surface Coating of Miscellaneous Metal Parts and Products**

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Sec.

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Table 2 to Subpart MMMM of Part 63. Applicability of General Provisions to Subpart MMMM

Table 3 to Subpart MMMM of Part 63. Default Organic HAP Mass Fraction for Solvents and Solvent Blends

Table 4 to Subpart MMMM of Part 63. Default Organic HAP Mass Fraction for Petroleum Solvent Groups

##### **What This Subpart Covers**

##### **§ 63.3880 What is the purpose of this subpart?**

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

##### **§ 63.3881 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 the surface coating of miscellaneous metal parts and products, and it includes the subcategories listed in paragraphs (a)(1) through (3) of this section. Surface coating is the application of coatings to a substrate using, for example, spray guns or dip tanks. Miscellaneous metal parts and products include, but are not limited to, metal components of the following types of products: automotive parts and accessories, bicycles and sporting goods, recreational vehicles, extruded aluminum structural components, railroad cars, heavy duty trucks, medical equipment, lawn and garden equipment, electronic equipment, magnet wire, steel drums, industrial machinery, and numerous

other industrial and consumer products. The source category also includes the surface coating of the plastic contained in parts and products that are pre-assembled from plastic and metal components, where greater than 50 percent of the coatings (by volume, determined on a rolling 12-month basis) are applied to the metal surface, and where the surface coating of the metal surface is subject to this subpart. If your source is subject to this subpart and you can demonstrate that more than 50 percent of your coatings are applied to metal surfaces, then compliance with this subpart constitutes compliance with the NESHAP for plastic parts and products surface coating.<sup>1</sup> You must maintain records (such as coating usage or surface area) to document that more than 50 percent of the coatings are applied to metal surfaces.

(1) The general use subcategory includes all surface coating operations in the miscellaneous metal parts and products source category that are not included in the magnet, wire, or rubber to metal subcategories.

(2) The magnet wire subcategory includes surface coating operations that are performed using coatings that meet the definition of magnet wire coatings in § 63.3981.

(3) The rubber to metal subcategory includes surface coating operations that are performed using coatings that meet the definition of rubber to metal coatings in § 63.3981.

(b) You are subject to this subpart if you own or operate a new, reconstructed, or existing affected source, as defined in § 63.3882, that uses 946 liters (250 gallons) per year, or more, of coatings in the source category defined in paragraph (a) of this section and that is a major source, is located at a major source, or is part of a major source of emissions of hazardous air pollutants (HAP). A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year or any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year.

(c) This subpart does not apply to surface coating that meets 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, as determined according to § 63.3941(a).

(2) Surface coating subject to any other NESHAP in this part as of [DATE OF PUBLICATION OF FINAL RULE IN THE **Federal Register**].

(3) Surface coating that occurs at research or laboratory facilities, that is part of janitorial, building, and facility maintenance operations, or that occurs at hobby shops operated for noncommercial purposes.

(4) For the purpose of this subpart, the extrusion of a plastic covering onto metal wire or cable is not considered to be a surface coating operation.

(5) The provisions of this subpart do not apply to coatings used in volumes of less than 189 liters (50 gallons) per year, provided that the total volume of coatings exempt under this paragraph (c)(5) does not exceed 946 liters (250 gallons) per year at the facility.

(d) If you own or operate an affected source that is subject to this subpart and at the same affected source you also perform surface coating subject to any other NESHAP in this part, you may choose to be subject to the requirements of the more stringent of the subparts for the entire surface coating facility. If you choose to be subject to the requirements of another subpart and demonstrate that, by doing so, your facilitywide HAP emissions in kilograms (kg) per year (tons per year (tpy)) from surface coating operations will be less than or equal to the emissions achieved by complying separately with all applicable subparts, compliance with the more stringent NESHAP will constitute compliance with this subpart.

#### **§ 63.3882 What parts of my plant does this subpart cover?**

(a) This subpart applies to each new, reconstructed, and existing affected source within each of the three subcategories listed in § 63.3881(a).

(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 miscellaneous metal parts and products within each subcategory.

(1) All coating operations as defined in § 63.3981;

(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 August 13, 2002, and the construction is of a completely new miscellaneous metal parts and products surface coating facility where previously no miscellaneous metal parts and products surface coating facility had existed.

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

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

#### **§ 63.3883 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 §§ 63.3940, 63.3950, and 63.3960.

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

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

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

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

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

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

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

<sup>1</sup> Currently under development.

(d) You must meet the notification requirements in § 63.3910 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

#### § 63.3890 What emission limits must I meet?

(a) For a new or reconstructed affected source, you must limit organic HAP emissions to the atmosphere from the affected source to the applicable limit specified in paragraphs (a)(1) through (4) of this section, determined according

to the requirements in § 63.3941, § 63.3951, or § 63.3961.

(1) For a new or reconstructed general use affected source, you must limit organic HAP emissions to the atmosphere from the affected source to the HAP limit specified by Equation 1 of this section during each 12-month compliance period.

$$\text{HAP Limit} = \frac{0.23(\text{GU}) + 3.30(\text{HP})}{(\text{GU} + \text{HP})} \quad (\text{Eq. 1})$$

Where:

HAP limit = total allowable organic HAP that can be emitted to the atmosphere from the miscellaneous metal parts and products surface coating operations, in kg organic HAP per liter of coating solids used during the 12-month compliance period.

0.23 = HAP emission limit for general use coatings, kg HAP/liter coating solids (1.94 pounds (lbs) HAP/gal coating solids).

GU = volume of general use coating solids used during the 12-month compliance period, liters.

3.30 = HAP emission limit for high performance coatings, kg HAP/liter coating solids (27.54 lbs HAP/gal coating solids).

HP = volume of high performance coating solids used during the 12-month compliance period, liters.

(2) If you use only one of the coating types (general use or high performance), then you must limit organic HAP emissions to the atmosphere to no more than the HAP emission limit specified for that coating type in the definition of terms used in Equation 1 of this section.

(3) For each new or reconstructed magnet wire affected source, limit organic HAP emissions to no more than 0.05 kg HAP/liter coating solids (0.44 pound (lb) HAP/gallon (gal) coating solids) used during each 12-month compliance period.

(4) For each new or reconstructed rubber to metal affected source, limit organic HAP emissions to no more than

0.82 kg HAP/liter coating solids (6.80 lb HAP/gal coating solids) used during each 12-month compliance period.

(b) For an existing affected source, you must limit organic HAP emissions to the atmosphere from the affected source to the applicable limit specified in paragraphs (b)(1) through (4) of this section, determined according to the requirements in § 63.3941, § 63.3951, or § 63.3961.

(1) For each existing general use affected source, you must limit organic HAP emissions to the atmosphere from the affected source to the HAP limit specified by Equation 2 of this section during each 12-month compliance period.

$$\text{HAP Limit} = \frac{0.31(\text{GU}) + 3.30(\text{HP})}{(\text{GU} + \text{HP})} \quad (\text{Eq. 2})$$

Where:

HAP limit = total allowable organic HAP that can be emitted to the atmosphere from the miscellaneous metal parts and products surface coating operations, in kg organic HAP per liter of coating solids used during the 12-month compliance period.

0.31 = HAP emission limit for general use coatings, kg HAP/liter coating solids (2.60 lbs HAP/gal coating solids).

GU = volume of general use coating solids used during the 12-month compliance period, liters.

3.30 = HAP emission limit for high performance coatings, kg HAP/liter coating solids (27.54 lbs HAP/gal coating solids).

HP = volume of high performance coating solids used during the 12-month compliance period, liters.

(2) If you use only one of the coating types, then you must limit organic HAP emissions to the atmosphere to no more

than the HAP emission limit specified for that coating type in the definition of terms used in Equation 2 of this section.

(3) For each existing magnet wire affected source, limit organic HAP emissions to no more than 0.12 kg HAP/liter coating solids (1.00 lb HAP/gal coating solids) used during each 12-month compliance period.

(4) For each existing rubber to metal affected source, limit organic HAP emissions to no more than 4.50 kg HAP/liter coating solids (37.70 lbs HAP/gal coating solids) used during each 12-month compliance period.

#### § 63.3891 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 § 63.3890. 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 § 63.3930(c), and you must report it in the next semiannual compliance report required in § 63.3920.

(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 § 63.3890, and that each thinner and each cleaning material used contains no organic HAP. You must meet all the

requirements of §§ 63.3940, 63.3941, and 63.3942 to demonstrate compliance with the applicable 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 § 63.3890, calculated as a rolling 12-month emission rate and determined on a monthly basis. You must meet all the requirements of §§ 63.3950, 63.3951, and 63.3952 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 emissions reductions achieved by emission capture systems and add-on controls, the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit in § 63.3890, calculated as a rolling 12-month emission rate and determined on a monthly basis. If you choose to use this option, you must also demonstrate that all emission capture systems and add-on control devices for the coating operation(s) meet the operating limits required in § 63.3892, except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.3961(j); and that you meet the work practice standards required in § 63.3893. You must meet all the requirements of §§ 63.3960 through 63.3968 to demonstrate compliance with the emission limits, operating limits, and work practice standards using this option.

**§ 63.3892 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 § 63.3961(j), you must meet the operating limits specified in Table 1 to this subpart. These operating limits apply to the emission capture and control systems on the coating operation(s) for which you use this option, and you must establish the operating limits during the performance test according to the requirements in

§ 63.3967. 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 to this subpart, or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of alternative monitoring under § 63.8(f).

**§ 63.3893 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**

**§ 63.3900 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 § 63.3891(a) and (b), must be in compliance with the applicable emission limit in § 63.3890 at all times.

(2) Any coating operation(s) for which you use the emission rate with add-on controls option, as specified in § 63.3891(c), must be in compliance with the emission limitations as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) The coating operation(s) must be in compliance with the applicable emission limit in § 63.3890 at all times except during periods of startup, shutdown, and malfunction.

(ii) The coating operation(s) must be in compliance with the operating limits for emission capture systems and add-on control devices required by § 63.3892 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 § 63.3961(j).

(iii) The coating operation(s) must be in compliance with the work practice standards in § 63.3893 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 § 63.3883 and the date when the initial emission capture system and add-on control device performance tests have been completed, as specified in § 63.3960. This requirement does not apply to a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.3961(j) in lieu of conducting performance tests.

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



capture efficiency if the process equipment malfunctions, such as conveyors that move parts among enclosures.

**§ 63.3901 What parts of the General Provisions apply to me?**

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

**Notifications, Reports, and Records**

**§ 63.3910 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 § 63.3940, § 63.3950, or § 63.3960 that applies to your affected source. The Notification of Compliance Status must contain the information specified in paragraphs (c)(1) through (10) 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 § 63.3940, § 63.3950, or § 63.3960 that applies to your affected source.

(4) Identification of the compliance option or options specified in § 63.3891 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 § 63.3890, include all the calculations you used to determine the kg (lbs) organic HAP emitted per liter (gal) 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 § 63.3941(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 § 63.3951.

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

(i) For the compliant material option, provide an example calculation of the organic HAP content for one coating, using Equation 1 of § 63.3941.

(ii) For the emission rate without add-on controls option, provide the calculation of the total mass of organic HAP emissions for each month; the calculation of the total volume of coating solids used each month; and the calculation of the 12-month organic HAP emission rate, using Equations 1 and 1A through 1C, 2, and 3, respectively, of § 63.3951.

(iii) For the emission rate with add-on controls option, provide the calculation of the total mass of organic HAP emissions for the coatings, thinners, and cleaning materials used each month, using Equations 1 and 1A through 1C of § 63.3951; the calculation of the total volume of coating solids used each month, using Equation 2 of § 63.3951; the calculation of the mass of organic

HAP emission reduction each month by emission capture systems and add-on control devices, using Equations 1 and 1A through 1D of § 63.3961 and Equations 2, 3, and 3A through 3C of § 63.3961 as applicable; the calculation of the total mass of organic HAP emissions each month, using Equation 4 of § 63.3961; and the calculation of the 12-month organic HAP emission rate, using Equation 5 of § 63.3961.

(9) For the emission rate with add-on controls option, you must include the information specified in paragraphs (c)(9)(i) through (iv) of this section, except that the requirements in paragraphs (c)(9)(i) through (iii) of this section do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.3961(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 § 63.3893.

(10) If you have chosen to comply with this subpart by being subject to the requirements of another subpart, your Notification of Compliance Status report for this subpart must include a statement certifying your intent, as well as documentation (and supporting materials) that doing so will result in an overall HAP emission level in kg per year (tpy) equal to or less than the emission level that would result from complying separately with each applicable subpart.

**§ 63.3920 What reports must I submit?**

(a) *Semiannual compliance reports.* You must submit semiannual

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

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

(i) The first semiannual compliance report must cover the first semiannual reporting period which begins the day after the end of the initial compliance period described in § 63.3940, § 63.3950, or § 63.3960 that applies to your affected source and ends on June 30 or December 31, whichever occurs first following the end of the initial compliance period.

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

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

(iv) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR

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

(2) *Inclusion with title V report.* Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a semiannual compliance report pursuant to this section along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the semiannual

compliance report includes all required information concerning deviations from any emission limitation in this subpart, its submission shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a semiannual compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.

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

(i) Company name and address.

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

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

(iv) Identification of the compliance option or options specified in § 63.3891 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 (§ 63.3891(b) or (c)), the calculation results for each rolling 12-month organic HAP emission rate during the 6-month reporting period.

(4) *No deviations.* If there were no deviations from the emission limitations in §§ 63.3890, 63.3892, and 63.3893 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 limits in § 63.3890, 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, using Equation 1 of § 63.3941 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 § 63.3890, the semiannual compliance report must contain the information in paragraphs (a)(6)(i) through (iii) of this section.

(i) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in § 63.3890.

(ii) The calculations used to determine the 12-month 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 § 63.3951; and if applicable, the calculation used to determine mass of organic HAP in waste materials according to § 63.3951(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 12-month organic HAP emission rate exceeded the applicable emission limit in § 63.3890.

(ii) The calculations used to determine the 12-month organic HAP emission rate for each compliance period in which a deviation occurred. You must provide the calculation of the total mass of organic HAP emissions for the coatings, thinners, and cleaning materials used each month, using Equations 1 and 1A through 1C of § 63.3951 and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to § 63.3951(e)(4); the calculation of the total volume of coating solids used each month, using Equation 2 of § 63.3951; the calculation of the mass of organic HAP emission reduction each month by emission capture systems and add-on control devices, using Equations 1 and 1A through 1D of § 63.3961 and Equations 2, 3, and 3A through 3C of § 63.3961 as applicable; the calculation of the total mass of organic HAP emissions each month, using Equation 4 of § 63.3961; and the calculation of the 12-month organic HAP emission rate, using Equation 5 of § 63.3961. 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 to this subpart; date and time period of any bypass of the add-on control device; and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(ix) A summary of the total duration of each deviation from an operating limit in Table 1 to 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 to 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 paragraphs (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).

#### § 63.3930 What records must I keep?

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

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

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

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

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

(2) For the compliant material option, a record of the calculation of the organic HAP content for each coating, using Equation 1 of § 63.3941.

(3) For the emission rate without add-on controls option, a record of the calculation of the total mass of organic HAP emissions for the coatings, thinners, and cleaning materials used each month, using Equations 1, 1A through 1C, and 2 of § 63.3951 and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to § 63.3951(e)(4); the calculation of the total volume of coating solids used each month, using Equation 2 of § 63.3951; and the

calculation of each 12-month organic HAP emission rate, using Equation 3 of § 63.3951.

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

(i) The calculation of the total mass of organic HAP emissions for the coatings, thinners, and cleaning materials used each month, using Equations 1 and 1A through 1C of § 63.3951 and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to § 63.3951(e)(4).

(ii) The calculation of the total volume of coating solids used each month, using Equation 2 of § 63.3951.

(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 § 63.3961 and Equations 2, 3, and 3A through 3C of § 63.3961 for as applicable.

(iv) The calculation of the total mass of organic HAP emissions each month, using Equation 4 of § 63.3961.

(v) The calculation of each 12-month organic HAP emission rate, using Equation 5 of § 63.3961.

(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 § 63.3951 for organic HAP contained in waste materials sent to or designated for shipment to a treatment, storage, and disposal facility (TSDF) according to § 63.3951(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 § 63.3951; 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 § 63.3951.

(3) The methodology used in accordance with § 63.3951(e)(4) to determine the total amount of waste materials sent to or the amount collected, stored, and designated for transport to a TSDF each month; and the methodology to determine the mass of organic HAP contained in these waste materials. This must include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment.

(i) [Reserved]

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

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

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

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

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

(4) For each capture system that is a PTE, the data and documentation you used to support a determination that the capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and has a capture efficiency of 100 percent, as specified in § 63.3965(a).

(5) For each capture system that is not a PTE, the data and documentation you used to determine capture efficiency according to the requirements specified in §§ 63.3964 and 63.3965(b) through (e), including the records specified in paragraphs (k)(5)(i) through (iii) of this section that apply to you.

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

including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a temporary total enclosure or a building enclosure.

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

(iii) *Records for an alternative protocol.* Records needed to document a capture efficiency determination using an alternative method or protocol as specified in § 63.3965(e), if applicable.

(6) The records specified in paragraphs (k)(6)(i) and (ii) of this section for each add-on control device organic HAP destruction or removal efficiency determination as specified in § 63.3966.

(i) Records of each add-on control device performance test conducted according to §§ 63.3964 and 63.3966.

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

(7) Records of the data and calculations you used to establish the emission capture and add-on control device operating limits as specified in § 63.3967 and to document compliance with the operating limits as specified in Table 1 to this subpart.

(8) A record of the work practice plan required by § 63.3893 and documentation that you are implementing the plan on a continuous basis.

**§ 63.3931 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

#### § 63.3940 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 § 63.3941. The initial compliance period begins on the applicable compliance date specified in § 63.3883 and ends on the last day of the twelfth month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. The initial compliance demonstration includes the calculations according to § 63.3941 and supporting documentation showing that, during the initial compliance period, you used no coating with an organic HAP content that exceeded the applicable emission limits in § 63.3890, and that you used no thinners or cleaning materials that contained organic HAP.

#### § 63.3941 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 limits in § 63.3890 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

§§ 63.3892 and 63.3893, 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 have been 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 nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP.

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

(4) *Information from the supplier or manufacturer of the material.* You may

rely on information other than that generated by the test methods specified in paragraphs (a)(1) through (3) of this section, such as manufacturer's formulation data, if it represents each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other 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 to 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 to this subpart, the Method 311 results will take precedence.

(b) *Determine the volume fraction of coating solids for each coating.* You must determine the volume fraction of coating solids (liters of coating solids per liter of coating) for each coating used during the compliance period by a test or by information provided by the supplier or the manufacturer of the material, as specified in paragraphs (b)(1) and (2) of this section. If test results obtained according to paragraph (b)(1) of this section do not agree with the information obtained under paragraph (b)(2) of this section, the test results will take precedence.

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

(2) *Information from the supplier or manufacturer of the material.* You may

obtain the volume fraction of coating solids for each coating from the supplier or manufacturer.

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

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

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

Where:

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

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

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

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

(e) *Compliance demonstration.* The calculated organic HAP content for each coating used during the initial compliance period must be less than or equal to the applicable emission limits in § 63.3890; 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 §§ 63.3930 and 63.3931. As part of the Notification of Compliance Status required in § 63.3910, 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 limits in § 63.3890, and you used no thinners or cleaning materials that contained organic HAP, determined according to paragraph (a) of this section.

#### **§ 63.3942 How do I demonstrate continuous compliance with the emission limitations?**

(a) For each compliance period to demonstrate continuous compliance, you must use no coating for which the organic HAP content determined using Equation 1 of § 63.3941, exceeds the applicable emission limits in § 63.3890, and use no thinner or cleaning material that contains organic HAP, determined according to § 63.3941(a). A compliance period consists of 12 months. Each month after the end of the initial compliance period described in § 63.3940 is the end of a compliance period consisting of that month and the preceding 11 months.

(b) If you choose to comply with the emission limitations by using the compliant material option, the use of any coating, thinner, or cleaning material that does not meet the criteria specified in paragraph (a) of this section is a deviation from the emission limitations that must be reported as specified in §§ 63.3910(c)(6) and 63.3920(a)(5).

(c) As part of each semiannual compliance report required by § 63.3920, 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 § 63.3890, 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 limits in § 63.3890, and you used no thinner or cleaning material that contained organic HAP, determined according to § 63.3941(a).

(d) You must maintain records as specified in §§ 63.3930 and 63.3931.

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

##### **§ 63.3950 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 § 63.3951. The initial compliance period begins on the applicable compliance date specified in § 63.3883 and ends on the last day of the twelfth month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coating solids each month and then calculate a

12-month organic HAP emission rate at the end of the initial 12-month compliance period. The initial compliance demonstration includes the calculations according to § 63.3951 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in § 63.3890.

##### **§ 63.3951 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 § 63.3890, but is not required to meet the operating limits or work practice standards in §§ 63.3892 and 63.3893, respectively. You must meet all the requirements of this section to demonstrate initial compliance with the applicable emission limit in § 63.3890. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate with add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners, or cleaning materials that have been reclaimed 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 each month according to the requirements in § 63.3941(a).

(b) *Determine the volume fraction of coating solids for each coating.* Determine the volume fraction of coating solids for each coating used during each month according to the requirements in § 63.3941(b).

(c) *Determine the density of each material.* Determine the density of each coating, thinner, and cleaning material used during each month from test results using ASTM Method D1475–98, information from the supplier or

manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475-98 test results and other such information sources, the test results will take precedence.

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

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

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

Where:

$H_e$  = total mass of organic HAP emissions during the month, kg.  
 $A$  = total mass of organic HAP in the coatings used during the month, kg, as calculated in Equation 1A of this section.  
 $B$  = total mass of organic HAP in the thinners used during the month, kg, as calculated in Equation 1B of this section.  
 $C$  = total mass of organic HAP in the cleaning materials used during the month, kg, as calculated in Equation 1C of this section.  
 $R_w$  = total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the month, kg, determined according to paragraph (e)(4) of this section. (You may assign a value of zero to  $R_w$  if you do not wish to use this allowance.)

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

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

Where:

$A$  = total mass of organic HAP in the coatings used during the month, kg.  
 $\text{Vol}_{c,i}$  = total volume of coating, i, used during the month, liters.  
 $D_{c,i}$  = density of coating, i, kg coating per liter coating.  
 $W_{c,i}$  = mass fraction of organic HAP in coating, i, kg organic HAP per kg coating.  
 $m$  = number of different coatings used during the month.

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

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

Where:

$B$  = total mass of organic HAP in the thinners used during the month, kg.  
 $\text{Vol}_{t,j}$  = total volume of thinner, j, used during the month, liters.  
 $D_{t,j}$  = density of thinner, j, kg per liter.  
 $W_{t,j}$  = mass fraction of organic HAP in thinner, j, kg organic HAP per kg thinner.  
 $n$  = number of different thinners used during the month.

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

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

Where:

$C$  = total mass of organic HAP in the cleaning materials used during the month, kg.  
 $\text{Vol}_{s,k}$  = total volume of cleaning material, k, used during the month, liters.  
 $D_{s,k}$  = density of cleaning material, k, kg per liter.  
 $W_{s,k}$  = mass fraction of organic HAP in cleaning material, k, kg organic HAP per kg material.  
 $p$  = number of different cleaning materials used during the month.

(4) If you choose to account for the mass of organic HAP contained in waste materials sent or designated for shipment to a hazardous waste TSDF in Equation 1 of this section, then you must determine it according to paragraphs (e)(4) (i) through (iv) of this section.

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

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

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

(iv) You must document the amount of waste materials and the total mass of organic HAP they contain, as required in § 63.3930(h). To the extent that waste manifests include this information, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.

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

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

Where:

$V_{st}$  = total volume of coating solids used during the month, liters.  
 $\text{Vol}_{c,i}$  = total volume of coating, i, used during the month, liters.  
 $V_{s,i}$  = volume fraction of coating solids for coating, i, liter solids per liter coating, determined according to § 63.3941(b).  
 $m$  = number of coatings used during the month.

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

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

Where:

$H_{yr}$  = organic HAP emission rate for the 12-month compliance period, kg organic HAP per liter coating solids.  
 $H_e$  = total mass of organic HAP emissions from all materials used during month, y, kg, as calculated by Equation 1 of this section.  
 $V_{st}$  = total volume of coating solids used during month, y, liters, as calculated by Equation 2 of this section.  
 $y$  = identifier for months.

(h) *Compliance demonstration.* The organic HAP emission rate for the initial 12-month compliance period must be less than or equal to the applicable emission limit in § 63.3890. You must keep all records as required by §§ 63.3930 and 63.3931. As part of the

Notification of Compliance Status required by § 63.3910, 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 § 63.3890, determined according to this section.

**§ 63.3952 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 § 63.3951(a) through (g), must be less than or equal to the applicable emission limit in § 63.3890. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in § 63.3950 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in § 63.3951(a) through (g) on a monthly basis using data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit in § 63.3890, this is a deviation from the emission limitations for that compliance period and must be reported as specified in §§ 63.3910(c)(6) and 63.3920(a)(6).

(c) As part of each semiannual compliance report required by § 63.3920, 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 § 63.3890, determined according to § 63.3951(a) through (g).

(d) You must maintain records as specified in §§ 63.3930 and 63.3931.

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

**§ 63.3960 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 § 63.3883. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.3961(j), you must conduct a performance test of each capture system and add-on control device according to §§ 63.3964, 63.3965, and 63.3966 and establish the operating limits required by § 63.3892 no later than 180 days after the applicable compliance date specified in § 63.3883. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.3961(j), you must initiate the first material balance no later than the applicable compliance date specified in § 63.3883.

(2) You must develop and begin implementing the work practice plan required by § 63.3893 no later than the compliance date specified in § 63.3883.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of § 63.3961. The initial compliance period begins on the applicable compliance date specified in § 63.3883 and ends on the last day of the twelfth month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coating solids used each month and then calculate a 12-month organic HAP emission rate at the end of the initial 12-month compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.3964, 63.3965, and 63.3966; results of liquid-liquid material balances conducted according to § 63.3961(j); calculations according to § 63.3961 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in § 63.3890; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.3968; and documentation of whether you developed and implemented the work practice plan required by § 63.3893.

(4) You do not need to comply with the operating limits for the emission capture system and add-on control

device required by § 63.3892 until after you have completed the performance tests specified in paragraph (a)(1) of this section. Instead, you must maintain a log detailing the operation and maintenance of the emission capture system, add-on control device, and continuous parameter monitors during the period between the compliance date and the performance test. You must begin complying with the operating limits for your affected source on the date you complete the performance tests specified in paragraph (a)(1) of this section. The requirements in this paragraph do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements in § 63.3961(j).

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

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in § 63.3883. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.3961(j), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§ 63.3964, 63.3965, and 63.3966 and establish the operating limits required by § 63.3892 no later than the compliance date specified in § 63.3883. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.3961(j), you must initiate the first material balance no later than the compliance date specified in § 63.3883.

(2) You must develop and begin implementing the work practice plan required by § 63.3893 no later than the compliance date specified in § 63.3883.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of § 63.3961. The initial compliance period begins on the applicable compliance date specified in § 63.3883 and ends on the last day of the twelfth month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coating solids used each month and then calculate a 12-month organic HAP emission rate at the end of the initial 12-month compliance period. The initial compliance demonstration includes the results of emission capture system and



add-on control device performance tests conducted according to §§ 63.3964, 63.3965, and 63.3966; results of liquid-liquid material balances conducted according to § 63.3961(j); calculations according to § 63.3961 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in § 63.3890; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.3968; and documentation of whether you developed and implemented the work practice plan required by § 63.3893.

**§ 63.3961 How do I demonstrate initial compliance?**

(a) You may use the emission rate with add-on controls option for any coating operation, for any group of coating operations in the affected source, or for all of the coating operations in the affected source. You may include both controlled and uncontrolled coating operations in a group for which you use this option. You must use either the compliant material option or the emission rate without add-on controls option for any coating operation in the affected source for which you do not use the emission rate with add-on controls option. To demonstrate initial compliance, the coating operation(s) for which you use the emission rate with add-on controls option must meet the applicable emission limitations in §§ 63.3890, 63.3892, and 63.3893. You must meet all the requirements of this section to demonstrate initial compliance with the emission limitations. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate without add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners, or cleaning materials

that have been reclaimed and reused in the coating operation(s) for which you use the emission rate with add-on controls option.

(b) *Compliance with operating limits.* Except as provided in § 63.3960(a)(4), and except for solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements of paragraph (j) of this section, you must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by § 63.3892, using the procedures specified in §§ 63.3967 and 63.3968.

(c) *Compliance with work practice requirements.* You must develop, implement, and document your implementation of the work practice plan required by § 63.3893 during the initial compliance period, as specified in § 63.3930.

(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 § 63.3890.

(e) *Determine the mass fraction of organic HAP, density, volume used, and volume fraction of coating solids.* Follow the procedures specified in § 63.3951(a) through (d) to determine the mass fraction of organic HAP, density, and volume of each coating, thinner, and cleaning material used during each month; and the volume fraction of coating solids for each coating used during each month.

(f) *Calculate the total mass of organic HAP emissions before add-on controls.* Using Equation 1 of § 63.3951, calculate the total mass of organic HAP emissions before add-on controls from all coatings, thinners, and cleaning materials used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option.

(g) *Calculate the organic HAP emission reduction for each controlled coating operation.* Determine the mass of organic HAP emissions reduced for each controlled coating operation

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

(h) *Calculate the organic HAP emission reduction for each controlled coating operation not using liquid-liquid material balance.* For each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emission reduction using Equation 1 of this section. The calculation applies the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coatings, thinners, and cleaning materials that are used in the coating operation served by the emission capture system and add-on control device during each month. For any period of time a deviation specified in § 63.3963(c) or (d) occurs in the controlled coating operation, including a deviation during a period of startup, shutdown, or malfunction, you must assume zero efficiency for the emission capture system and add-on control device. Equation 1 of this section treats the materials used during such a deviation as if they were used on an uncontrolled coating operation for the time period of the deviation.

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

Where:

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

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

kg, as calculated in Equation 1A of this section.

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

$C_c$  = total mass of organic HAP in the cleaning materials used in the

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

$H_{unc}$  = total mass of organic HAP in the coatings, thinners, and cleaning materials used during all deviations specified in § 63.3963(c) and (d) that occurred during the month in

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

CE = capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in §§ 63.3964 and 63.3965 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 §§ 63.3964 and 63.3966 to measure and record the organic HAP destruction or removal efficiency.

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

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

Where:

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

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

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

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

$m$  = number of different coatings used.

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

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

Where:

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

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

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

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

$n$  = number of different thinners used.

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

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

Where:

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

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

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

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

$p$  = number of different cleaning materials used.

(4) Calculate the mass of organic HAP in the coatings, thinners, and cleaning materials used in the controlled coating operation during deviations specified in § 63.3963(c) and (d), using Equation 1D of this section.

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

Where:

$H_{\text{unc}}$  = total mass of organic HAP in the coatings, thinners, and cleaning materials used during all deviations specified in § 63.3963(c) and (d) that occurred during the month in the controlled coating operation, kg.

$\text{Vol}_h$  = 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 each controlled coating operation using liquid-liquid material balances.* For each controlled coating operation using a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emission reduction by applying the volatile organic matter collection and recovery efficiency to the mass of organic HAP contained in the coatings, thinners, and cleaning materials that are used in the

coating operation controlled by the solvent recovery system during each month. Perform a liquid-liquid material balance for each month as specified in paragraphs (j)(1) through (6) of this section. Calculate the mass of organic HAP emission reduction by the solvent recovery system as specified in paragraph (j)(7) of this section.

(1) For each solvent recovery system, install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile organic matter recovered by the solvent recovery system each month. The device must be initially certified by the manufacturer to be accurate to within + 2.0 percent of the mass of volatile organic matter recovered.

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

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

(4) Determine the density of each coating, thinner, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, kg per liter, according to § 63.3951(c).

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

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

$$R_V = 100 \frac{M_{VR}}{\sum_{i=1}^m \text{Vol}_i D_i M V_{c,i} + \sum_{j=1}^n \text{Vol}_j D_j W V_{t,j} + \sum_{k=1}^p \text{Vol}_k D_k W V_{s,k}} \quad (\text{Eq. 2})$$

Where:	$Vol_j$ = volume of thinner, j, used in the coating operation controlled by the solvent recovery system during the month, liters.	$m$ = number of different coatings used in the coating operation controlled by the solvent recovery system during the month.
$R_V$ = volatile organic matter collection and recovery efficiency of the solvent recovery system during the month, percent.	$D_j$ = density of thinner, j, kg per liter.	$n$ = number of different thinners used in the coating operation controlled by the solvent recovery system during the month.
$M_{VR}$ = mass of volatile organic matter recovered by the solvent recovery system during the month, kg.	$WV_{t,j}$ = mass fraction of volatile organic matter for thinner, j, kg volatile organic matter per kg thinner.	$p$ = number of different cleaning materials used in the coating operation controlled by the solvent recovery system during the month.
$Vol_i$ = volume of coating, i, used in the coating operation controlled by the solvent recovery system during the month, liters.	$Vol_k$ = volume of cleaning material, k, used in the coating operation controlled by the solvent recovery system during the month, liters.	(7) Calculate the mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system during the month using Equation 3 of this section.
$D_i$ = density of coating, i, kg per liter.	$D_k$ = density of cleaning material, k, kg per liter.	
$WV_{c,i}$ = mass fraction of volatile organic matter for coating, i, kg volatile organic matter per kg coating.	$WV_{s,k}$ = mass fraction of volatile organic matter for cleaning material, k, kg volatile organic matter per kg cleaning material.	

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

Where:	recovery system, kg, calculated using Equation 3A of this section.	calculated using Equation 3C of this section.
$H_{CSR}$ = mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system using a liquid-liquid material balance during the month, kg.	$B_{CSR}$ = total mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3B of this section.	$R_V$ = volatile organic matter collection and recovery efficiency of the solvent recovery system, percent, from Equation 2 of this section.
$A_{CSR}$ = total mass of organic HAP in the coatings used in the coating operation controlled by the solvent	$C_{CSR}$ = total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system, kg,	(i) Calculate the mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, using Equation 3A of this section.

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

Where:	$Vol_{c,i}$ = total volume of coating, i, used during the month in the coating operation controlled by the solvent recovery system, liters.	$m$ = number of different coatings used.
$A_{CSR}$ = total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system during the month, kg.	$D_{c,i}$ = density of coating, i, kg per liter.	(ii) Calculate the mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system, kg, using Equation 3B of this section.
	$W_{c,i}$ = mass fraction of organic HAP in coating, i, kg per kg.	

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

Where:	$Vol_{t,j}$ = total volume of thinner, j, used during the month in the coating operation controlled by the solvent recovery system, liters.	$n$ = number of different thinners used.
$B_{CSR}$ = total mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system during the month, kg.	$D_{t,j}$ = density of thinner, j, kg per liter.	(iii) Calculate the mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system during the month, kg, using Equation 3C of this section:
	$W_{t,j}$ = mass fraction of organic HAP in thinner, j, kg per kg.	

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

Where:

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

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

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

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

$p$  = number of different cleaning materials used.

(k) *Calculate the total volume of coating solids used.* Determine the total volume of coating solids used, liters, which is the combined volume of coating solids for all the coatings used

during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option, using Equation 2 of § 63.3951.

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

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

Where:

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

$H_e$  = total mass of organic HAP emissions before add-on controls from all the coatings, thinners, and cleaning materials used during the month, kg, determined according to paragraph (f) of this section.

$H_{C,i}$  = total mass of organic HAP emission reduction for controlled coating operation, i, not using a liquid-liquid material balance, during the month, kg, from Equation 1 of this section.

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

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

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

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

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

Where:

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

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

$V_{st,y}$  = total volume of coating solids used during month, y, liters, from Equation 2 of § 63.3951.

$y$  = identifier for months.

(n) *Compliance demonstration.* To demonstrate initial compliance with the emission limit, calculated using Equation 5 of this section, must be less than or equal to the applicable emission limit in § 63.3890. You must keep all records as required by §§ 63.3930 and 63.3931. As part of the Notification of Compliance Status required by § 63.3910, 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 § 63.3890, and you achieved the operating limits required by § 63.3892 and the work practice standards required by § 63.3893.

#### § 63.3962 [Reserved]

#### § 63.3963 How do I demonstrate continuous compliance with the emission limitations?

(a) To demonstrate continuous compliance with the applicable emission limit in § 63.3890, the organic HAP emission rate for each compliance period, determined according to the procedures in § 63.3961, must be equal to or less than the applicable emission limit in § 63.3890. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in § 63.3960 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in § 63.3961 on a monthly basis using data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit in § 63.3890, this is a deviation from the emission limitation for that compliance period and must be reported as specified in §§ 63.3910(c)(6) and 63.3920(a)(7).

(c) You must demonstrate continuous compliance with each operating limit required by § 63.3892 that applies to you, as specified in Table 1 to this subpart.

(1) If an operating parameter is out of the allowed range specified in Table 1 to this subpart, this is a deviation from the operating limit that must be reported as specified in §§ 63.3910(c)(6) and 63.3920(a)(7).

(2) If an operating parameter deviates from the operating limit specified in Table 1 to this subpart, then you must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation. For the purposes of completing the compliance calculations specified in § 63.3961(h), you must treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation as indicated in Equation 1 of § 63.3961.

(d) You must meet the requirements for bypass lines in § 63.3968(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 §§ 63.3910(c)(6) and 63.3920(a)(7). For the purposes of completing the compliance calculations specified in § 63.3961(h), you must treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the

deviation as indicated in Equation 1 of § 63.3961.

(e) You must demonstrate continuous compliance with the work practice standards in § 63.3893. 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 § 63.3930(k)(8), this is a deviation from the work practice standards that must be reported as specified in §§ 63.3910(c)(6) and 63.3920(a)(7).

(f) As part of each semiannual compliance report required in § 63.3920, 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 § 63.3890, and you achieved the operating limits required by § 63.3892 and the work practice standards required by § 63.3893 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 § 63.3900(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 §§ 63.3930 and 63.3931.

#### **§ 63.3964 What are the general requirements for performance tests?**

(a) You must conduct each performance test required by § 63.3960 according to the requirements in § 63.7(e)(1) and under the conditions in this section unless you obtain a waiver of the performance test according to the provisions in § 63.7(h).

(1) *Representative coating operation operating conditions.* You must conduct the performance test under representative operating conditions for the coating operation. Operations during periods of startup, shutdown, or malfunction, and during periods of nonoperation do not constitute representative conditions. You must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation.

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

(b) You must conduct each performance test of an emission capture system according to the requirements in § 63.3965. You must conduct each performance test of an add-on control device according to the requirements in § 63.3966.

#### **§ 63.3965 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 § 63.3960.

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

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

(2) Use Method 204A or F 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 the total mass of TVH liquid input from all the coatings, thinners, and cleaning materials used in the coating operation during each capture efficiency test run.

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

Where:

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

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

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

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

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

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

(i) Use Method 204D 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 of the emission capture system using Equation 2 of this section:

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

Where:

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

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

$\text{TVH}_{\text{uncaptured}}$  = 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 to the mass of TVH emissions not captured. Use a temporary total enclosure or a building enclosure and the procedures in paragraphs (d)(1) through (5) of this section to measure emission capture system efficiency using the gas-to-gas protocol.

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

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

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

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

(i) Use Method 204D 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 of the emission capture system using Equation 3 of this section:

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

Where:

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

TVH<sub>captured</sub> = total mass of TVH captured by the emission capture system as measured at the inlet to the add-on control device during the emission capture efficiency test run, kg.

TVH<sub>uncaptured</sub> = total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

(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.

**§ 63.3966 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 § 63.3960. 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-on control device is not an oxidizer.

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

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

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

Where:

M<sub>f</sub> = total gaseous organic emissions mass flow rate, kg/per hour (h).

C<sub>c</sub> = 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<sub>sd</sub> = 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<sup>3</sup>) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg).

(e) For each test run, determine the add-on control device organic emissions

destruction or removal efficiency, using Equation 2 of this section:

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

Where:

DRE = organic emissions destruction or removal efficiency of the add-on control device, percent.

M<sub>fi</sub> = 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<sub>fo</sub> = 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.

**§ 63.3967 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 § 63.3960 and described in §§ 63.3964, 63.3965, and 63.3966, you must establish the operating limits required by § 63.3892 according to this section, unless you have received approval for alternative monitoring and operating limits under § 63.8(f) as specified in § 63.3892.

(a) *Thermal oxidizers.* If your add-on control device is a thermal oxidizer, establish the operating limits according to paragraphs (a)(1) and (2) of this section.

(1) During the performance test, you must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. You must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(2) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for your thermal oxidizer.

(b) *Catalytic oxidizers.* If your add-on control device is a catalytic oxidizer, establish the operating limits according to either paragraphs (b)(1) and (2) or paragraphs (b)(3) and (4) of this section.

(1) During the performance test, you must monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every 15

minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed and the average temperature difference across the catalyst bed maintained during the performance test. These are the minimum operating limits for your catalytic oxidizer.

(3) As an alternative to monitoring the temperature difference across the catalyst bed, you may monitor the temperature at the inlet to the catalyst bed and implement a site-specific inspection and maintenance plan for your catalytic oxidizer as specified in paragraph (b)(4) of this section. During the performance test, you must monitor and record the temperature just before the catalyst bed at least once every 15 minutes during each of the three test runs. Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed during the performance test. This is the minimum operating limit for your catalytic oxidizer.

(4) You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s) for which you elect to monitor according to paragraph (b)(3) of this section. The plan must address, at a minimum, the elements specified in paragraphs (b)(4)(i) through (iii) of this section.

(i) Annual sampling and analysis of the catalyst activity (*i.e.*, conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures.

(ii) Monthly inspection of the oxidizer system, including the burner assembly and fuel supply lines for problems and, as necessary, adjust the equipment to assure proper air-to-fuel mixtures.

(iii) Annual internal and monthly external visual inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, you must replace the catalyst bed and conduct a new performance test to determine destruction efficiency according to § 63.3966.

(c) *Carbon adsorbers.* If your add-on control device is a carbon adsorber, establish the operating limits according to paragraphs (c)(1) and (2) of this section.

(1) You must monitor and record the total regeneration desorbing gas (*e.g.*, steam or nitrogen) mass flow for each regeneration cycle, and the carbon bed temperature after each carbon bed regeneration and cooling cycle for the regeneration cycle either immediately preceding or immediately following the performance test.

(2) The operating limits for your carbon adsorber are the minimum total desorbing gas mass flow recorded during the regeneration cycle and the maximum carbon bed temperature recorded after the cooling cycle.

(d) *Condensers.* If your add-on control device is a condenser, establish the operating limits according to paragraphs (d)(1) and (2) of this section.

(1) During the performance test, you must monitor and record the condenser outlet (product side) gas temperature at least once every 15 minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average condenser outlet (product side) gas temperature maintained during the performance test. This average condenser outlet gas temperature is the maximum operating limit for your condenser.

(e) *Concentrators.* If your add-on control device includes a concentrator, you must establish operating limits for the concentrator according to paragraphs (e)(1) through (4) of this section.

(1) During the performance test, you must monitor and record the desorption concentrate stream gas temperature at least once every 15 minutes during each of the three runs of the performance test.

(2) Use the data collected during the performance test to calculate and record the average temperature. This is the minimum operating limit for the desorption concentrate gas stream temperature.

(3) During the performance test, you must monitor and record the pressure drop of the dilute stream across the concentrator at least once every 15 minutes during each of the three runs of the performance test.

(4) Use the data collected during the performance test to calculate and record the average pressure drop. This is the maximum operating limit for the dilute stream across the concentrator.

(f) *Emission capture systems.* For each capture device that is not part of a PTE that meets the criteria of § 63.3965(a), establish an operating limit for either the gas volumetric flow rate or duct static pressure, as specified in paragraphs (f)(1) and (2) of this section. The operating limit for a PTE is specified in Table 1 to this subpart.

(1) During the capture efficiency determination required by § 63.3960 and described in §§ 63.3964 and 63.3965, you must monitor and record either the gas volumetric flow rate or the duct static pressure for each separate capture device in your emission capture system at least once every 15 minutes during each of the three test runs at a point in

the duct between the capture device and the add-on control device inlet.

(2) Calculate and record the average gas volumetric flow rate or duct static pressure for the three test runs for each capture device. This average gas volumetric flow rate or duct static pressure is the minimum operating limit for that specific capture device.

**§ 63.3968 What are the requirements for continuous parameter monitoring system installation, operation, and maintenance?**

(a) *General.* You must install, operate, and maintain each CPMS specified in paragraphs (c), (e), (f), and (g) of this section according to paragraphs (a)(1) through (6) of this section. You must install, operate, and maintain each CPMS specified in paragraphs (b) and (d) of this section according to paragraphs (a)(3) through (5) of this section.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four equally spaced successive cycles of CPMS operation in 1 hour.

(2) You must determine the average of all recorded readings for each successive 3-hour period of the emission capture system and add-on control device operation.

(3) You must record the results of each inspection, calibration, and validation check of the CPMS.

(4) You must maintain the CPMS at all times and have available necessary parts for routine repairs of the monitoring equipment.

(5) You must operate the CPMS and collect emission capture system and add-on control device parameter data at all times that a controlled coating operation is operating, except during monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, if applicable, calibration checks and required zero and span adjustments).

(6) You must not use emission capture system or add-on control device parameter data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities when calculating data averages. You must use all the data collected during all other periods in calculating the data averages for determining compliance with the emission capture system and add-on control device operating limits.

(7) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS to provide valid data. Monitoring failures that are caused in part by poor



maintenance or careless operation are not malfunctions. Any period for which the monitoring system is out-of-control and data are not available for required calculations is a deviation from the monitoring requirements.

(b) *Capture system bypass line.* You must meet the requirements of paragraphs (b)(1) and (2) of this section for each emission capture system that contains bypass lines that could divert emissions away from the add-on control device to the atmosphere.

(1) You must monitor or secure the valve or closure mechanism controlling the bypass line in a nondiverting position in such a way that the valve or closure mechanism cannot be opened without creating a record that the valve was opened. The method used to monitor or secure the valve or closure mechanism must meet one of the requirements specified in paragraphs (b)(1)(i) through (iv) of this section.

(i) *Flow control position indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. The time of occurrence and flow control position must be recorded, as well as every time the flow direction is changed. The flow control position indicator must be installed at the entrance to any bypass line that could divert the emissions away from the add-on control device to the atmosphere.

(ii) *Car-seal or lock-and-key valve closures.* Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. You must visually inspect the seal or closure mechanism at least once every month to ensure that the valve is maintained in the closed position, and the emissions are not diverted away from the add-on control device to the atmosphere.

(iii) *Valve closure monitoring.* Ensure that any bypass line valve is in the closed (nondiverting) 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 § 63.3920.

(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 paragraph (a) and paragraph (c)(3)(i) through (vii) of this section for each gas temperature monitoring device.

(i) Locate the temperature sensor in a position that provides a representative temperature.

(ii) Use a temperature sensor with a measurement sensitivity of 4 degrees Fahrenheit or 0.75 percent of the temperature value, whichever is larger.

(iii) Shield the temperature sensor system from electromagnetic interference and chemical contaminants.

(iv) If a gas temperature chart recorder is used, it must have a measurement sensitivity in the minor division of at least 20 degrees Fahrenheit.

(v) Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, you must conduct a temperature sensor validation check in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 30 degrees Fahrenheit of the process temperature sensor reading.

(vi) Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor.

(vii) At least monthly, inspect components for integrity and electrical

connections for continuity, oxidation, and galvanic corrosion.

(d) *Carbon adsorbers.* If you are using a carbon adsorber as an add-on control device, you must monitor the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle, the carbon bed temperature after each regeneration and cooling cycle, and comply with paragraphs (a)(3) through (5) and paragraphs (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 paragraph (a) and paragraphs (e)(1) and (2) of this section.

(1) The gas temperature monitor must have a measurement sensitivity of 1 percent of the temperature recorded or 1 degree Fahrenheit, whichever is greater.

(2) The temperature monitor must provide a gas temperature record at least once every 15 minutes.

(f) *Concentrators.* If you are using a concentrator, such as a zeolite wheel or rotary carbon bed concentrator, you must comply with the requirements in paragraphs (f)(1) and (2) of this section.

(1) You must install a temperature monitor in the desorption gas stream. The temperature monitor must meet the requirements in paragraph (a) and paragraph (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 paragraph (a) and paragraphs (f)(2)(i) through (vii) of this section.

(i) Locate the pressure sensor(s) in or as close to a position that provides a representative measurement of the pressure.

(ii) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

(iii) Use a gauge with a minimum tolerance of 0.5 inch of water or a

transducer with a minimum tolerance of 1 percent of the pressure range.

(iv) Check the pressure tap daily.

(v) Using a manometer, check gauge calibration quarterly and transducer calibration monthly.

(vi) Conduct calibration checks anytime the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

(vii) At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.

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

(1) For each flow measurement device, you must meet the requirements in paragraph (a) and paragraphs (g)(1)(i) through (iv) of this section.

(i) Locate a flow sensor in a position that provides a representative flow measurement in the duct from each capture device in the emission capture system to the add-on control device.

(ii) Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(iii) Conduct a flow sensor calibration check at least semiannually.

(iv) At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.

(2) For each pressure drop measurement device, you must comply with the requirements in paragraph (a) and paragraphs (g)(2)(i) through (vi) of this section.

(i) Locate the pressure sensor(s) in or as close to a position that provides a representative measurement of the pressure drop across each opening you are monitoring.

(ii) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

(iii) Check pressure tap pluggage daily.

(iv) Using an inclined manometer with a measurement sensitivity of 0.0002 inch water, check gauge calibration quarterly and transducer calibration monthly.

(v) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

(vi) At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.

## Other Requirements and Information

### § 63.3980 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if 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 § 63.3893 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.

### § 63.3981 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 from a substrate to prepare for the application of a 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).

*Facility maintenance* means the routine repair or renovation (including the surface coating) of the tools, equipment, machinery, and structures that comprise the infrastructure of the affected facility and that are necessary for the facility to function in its intended capacity.

*General use coating* means any material that meets the definition of "coating" but does not meet the definition of "high performance coating," "rubber to metal coating," or "magnet wire coating" as defined in this section.

*High performance architectural coating* means any coating applied to architectural subsections which is required to meet the specifications of Architectural Aluminum Manufacturer's Association's publication number AAMA 605.2-1980.

*High performance coating* means any coating that meets the definition of "high performance architectural coating," "high temperature coating," or "military combat, tactical, and munitions coating" in this section.

*High temperature coating* means any coating applied to a substrate which during normal use must withstand temperatures of at least 538 degrees Celcius (1000 degrees Fahrenheit).

*Magnet wire coating* means any coating applied to wire that will subsequently be used in the fabrication of electrical devices such as motors or generators.

*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 § 63.3941. Manufacturer's formulation data may include, but are not limited to, information on density, organic HAP content, volatile organic matter content, and coating solids content.

*Mass fraction of organic HAP* means the ratio of the mass of organic HAP to the mass of a material in which it is contained, expressed as kg of organic HAP per kg of material.

*Military combat, tactical, and munitions coating* means coating materials and/or groups of coating materials that singularly or in combination provide military-unique performance and/or battlefield survival capabilities. These coatings include all coating components that have been qualified, or must be compatible with components that are qualified, by the military under a military specification, standard or equivalent as providing military-unique performance and battlefield survival capabilities.

*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 § 63.3941. 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.

*Rubber to metal coating* means the coatings that are applied to a metal substrate to provide an adhesive surface necessary for a rubber component to be bonded to the substrate.

*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 (referred to as paint stripping or depainting) for the purpose of preparing a substrate for application a coating.

*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.

If you are required to comply with operating limits by § 63.3892, you must comply with the applicable operating limits in the following table:

TABLE 1 TO SUBPART MMMM 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 * * *
1. thermal oxidizer .....	a. the average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to § 63.3967(a).	i. collecting the combustion temperature combustion data according to § 63.3968(c); ii. reducing the data to 3-hour block averages; and iii. maintaining the 3-hour average combustion temperature at or above the temperature limit.
2. catalytic oxidizer .....	a. the average temperature measured just before the catalyst bed in any 3-hour period must not fall below the limit established according to § 63.3967(b); and either.  b. ensure that the average temperature difference across the catalyst bed in any 3-hour period does not fall below the temperature difference limit established according to § 63.3967(b)(2); or.  c. develop and implement an inspection and maintenance plan according to § 63.3967(b)(4).	i. collecting the temperature data according to § 63.3968(c); ii. reducing the data to 3-hour block averages; and iii. maintaining the 3-hour average temperature before the catalyst bed at or above the temperature limit.  i. collecting the temperature data according to § 63.3968(c); ii. reducing the data to 3-hour block averages; and iii. maintaining the 3-hour average temperature difference at or above the temperature difference limit.  i. maintaining an up-to-date inspection and maintenance plan, records of annual catalyst activity checks, records of monthly inspections of the oxidizer system, and records of the annual internal inspections of the catalyst bed. If a problem is discovered during a monthly or annual inspection required by § 63.3967(b)(4), you must take corrective action as soon as practicable consistent with the manufacturer's recommendations.
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 § 63.3967(c).  b. the temperature of the carbon bed, after completing each regeneration and any cooling cycle, must not exceed the carbon bed temperature limit established according to § 63.3967(c).	i. measuring the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle according to § 63.3968(d); and ii. maintaining the total regeneration desorbing gas mass flow at or above the mass flow limit.  i. measuring the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle according to § 63.3968(d); and ii. operating the carbon beds such that each carbon bed is not returned to service until completing each regeneration and any cooling cycle until the recorded temperature of the carbon bed is at or below the temperature limit.
4. condenser .....	a. the average condenser outlet (product side) gas temperature in any 3-hour period must not exceed the temperature limit established according to § 63.3967(d).	i. collecting the condenser outlet (product side) gas temperature according to § 63.3968(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. concentrators, including zeolite wheels and rotary carbon adsorbers.	a. the average gas temperature desorption concentrate stream in any 3-hour period must not fall below the limit established according to § 63.3967(e).  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 § 63.3967(e).	i. collecting the temperature data according to § 63.3968(f); ii. reducing the data to 3-hour block averages; and iii. maintaining the 3-hour average temperature at or above the temperature limit.  i. collecting the pressure drop data according to § 63.3968(f); and ii. reducing the pressure drop data to 3-hour block averages; and iii. maintaining the 3-hour average pressure drop at or above the pressure drop limit.

TABLE 1 TO SUBPART MMMM 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 * * *
6. emission capture system that is a PTE according to § 63.3965(a).	a. the direction of the air flow at all times must be into the enclosure; and either. b. the average facial velocity of air through all natural draft openings in the enclosure at all at least 200 feet per minute; or. c. the pressure drop across the enclosure must be at least 0.007 inch H <sub>2</sub> O, as established in Method 204 of appendix M to 40 CFR part 51..	i. collecting the direction of air flow, and either the according to § 63.3968(g)(1) or the according to enclosure; and pressure drop across the according to § 63.3968(g)(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 enclosure at all times.
7. emission capture system that is not a PTE according to § 63.3965(a).	a. the average gas volumetric flow rate or duct static pressure in each duct between a capture device and add-on control device inlet in any 3-hour period must not fall below the average volumetric flow rate or duct static pressure limit established for that capture device according to § 63.3967(f).	i. collecting the gas volumetric flow rate or duct static pressure for each capture device according to § 63.3968(g); ii. reducing the data to 3-hour block according 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.

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

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

Citation	Subject	Applicable to subpart MMMM	Explanation
§ 63.1(a)(1)–(14)	General Applicability	Yes	Applicability to subpart MMMM is also specified in § 63.3881.
§ 63.1(b)(1)–(3)	Initial Applicability Determination.	Yes	
§ 63.1(c)(1)	Applicability After Standard Established.	Yes	Area sources are not subject to subpart MMMM.
§ 63.1(c)(2)–(3)	Applicability of Permit Program for Area Sources.	No	
§ 63.1(c)(4)–(5)	Extensions and Notifications	Yes	Additional definitions are specified in § 63.3981.
§ 63.1(e)	Applicability of Permit Program Before Relevant Standard is Set.	Yes	
§ 63.2	Definitions	Yes	
§ 63.3(a)–(c)	Units and Abbreviations	Yes	
§ 63.4(a)(1)–(5)	Prohibited Activities	Yes	
§ 63.4(b)–(c)	Circumvention/Severability	Yes	
§ 63.5(a)	Construction/Reconstruction	Yes	
§ 63.5(b)(1)–(6)	Requirements for Existing, Newly Constructed, and Reconstructed Sources.	Yes	
§ 63.5(d)	Application for Approval of Construction/Reconstruction.	Yes	
§ 63.5(e)	Approval of Construction/Reconstruction.	Yes	
§ 63.5(f)	Approval of Construction/Reconstruction Based on Prior State Review.	Yes	Section 63.3883 specifies the compliance dates.
§ 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 63.3883 specifies the compliance dates.
§ 63.6(c)(1)–(5)	Compliance Dates for Existing Sources.	Yes	
§ 63.6(e)(1)–(2)	Operation and Maintenance	Yes.	Only sources using an add-on control device to comply with the standard must complete startup, shutdown, and malfunction plans. Applies only to sources using an add-on control device to comply with the standards.
§ 63.6(e)(3)	Startup, Shutdown, and Malfunction Plan.	Yes	
§ 63.6(f)(1)	Compliance Except During Startup, Shutdown, and Malfunction.	Yes	

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

Citation	Subject	Applicable to subpart MMMM	Explanation
§ 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 MMMM 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 §§ 63.3964, 63.3965, and 63.3966.
§ 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 standards. Section 63.3960 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 Test Requirements—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 § 63.3968.
§ 63.8(a)(4)	Additional Monitoring Requirements.	No	Subpart MMMM does not have monitoring requirements for flares.
§ 63.8(b)	Conduct of Monitoring	Yes	
§ 63.8(c)(1)–(3)	Continuous Monitoring Systems (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 § 63.3968.
§ 63.8(c)(4)	CMS	No	Section 63.3968 specifies the requirements for the operation of CMS for capture systems and add-on control devices at sources using these to comply.
§ 63.8(c)(5)	COMS	No	Subpart MMMM does not have opacity or visible emission standards.
§ 63.8(c)(6)	CMS Requirements	No	Section 63.3968 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 and Reporting.	No	Section 63.3920 requires reporting of CMS out-of-control periods.
§ 63.8(d)–(e)	Quality Control Program and CMS Performance Evaluation.	No	Subpart MMMM 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 MMMM does not require the use of continuous emissions monitoring systems.
§ 63.8(g)(1)–(5)	Data Reduction	No	Sections 63.3967 and 63.3968 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/Opaity Test.	No	Subpart MMMM does not have opacity or visible emission standards.

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

Citation	Subject	Applicable to subpart MMMM	Explanation
63.9(g)(1)–(3)	Additional Notifications When Using CMS.	No	Subpart MMMM does not require the use of continuous emissions monitoring systems.
63.9(h)	Notification of Compliance Status.	Yes	Section 63.3910 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 §63.3930 and 63.3931.
63.10(b)(2) (i)–(v)	Recordkeeping Relevant to Startup, Shutdown, and Malfunction Periods and CMS.	Yes	Requirements for startup, shutdown, malfunction and records only apply to add-on control devices used to comply with the standard.
63.10(b)(2) (vi)–(xi)	Records	Yes.	
63.10(b)(2) (xii)	Records	Yes.	
63.10(b)(2) (xiii)	Records	No	Subpart MMMM does not require the use of continuous emissions monitoring systems.
63.10(b)(2) (xiv)	Records	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)	Records	No	The same records are required in § 63.3920(a)(7).
§ 63.10(c)(9)–(15)	Records	Yes.	
§ 63.10(d)(1)	General Reporting Requirements.	Yes	Additional requirements are specified in § 63.3920.
§ 63.10(d)(2)	Report of Performance Test Results.	Yes	Additional requirements are specified in § 63.3920(b).
§ 63.10(d)(3)	Reporting Opacity or Visible Emissions Observations.	No	Subpart MMMM 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 MMMM does not require the use of continuous emissions monitoring systems.
§ 63.10(e)(3)	Excess Emissions/CMS Performance Reports.	No	Section 63.3920(b) specifies the contents of periodic compliance reports.
§ 63.10(e)(4)	COMS Data Reports	No	Subpart MMMM does not specify requirements for opacity or COMS.
§ 63.10(f)	Recordkeeping/Reporting Waiver.	Yes.	
§ 63.11	Control Device Requirements/Flares.	No	Subpart MMMM does not specify use of flares for compliance.
§ 63.12	State Authority and Delegations.	Yes.	
§ 63.13	Addresses	Yes.	
§ 63.14	Incorporation by Reference	Yes.	
§ 63.15	Availability of Information/Confidentiality.	Yes.	

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data.

TABLE 3 TO SUBPART MMMM 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

TABLE 3 TO SUBPART MMMM 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
3. Hexane .....	110-54-3	0.5	n-hexane
4. n-Hexane .....	110-54-3	1.0	n-hexane
5. Ethylbenzene .....	100-41-4	1.0	Ethylbenzene
6. Aliphatic 140 .....	.....	0	None
7. Aromatic 100 .....	.....	0.02	1% xylene, 1% cumene
8. Aromatic 150 .....	.....	0.09	Naphthalene
9. Aromatic naphtha .....	64742-95-6	0.02	1% xylene, 1% cumene
10. Aromatic solvent .....	64742-94-5	0.1	Naphthalene
11. Exempt mineral spirits .....	8032-32-4	0	None
12. Lignoines (VM & P) .....	8032-32-4	0	None
13. Lactol spirits .....	64742-89-6	0.15	Toluene
14. Low aromatic white spirit .....	64742-82-1	0	None
15. Mineral spirits .....	64742-88-7	0.01	Xylenes
16. Hydrotreated naphtha .....	64742-48-9	0	None
17. Hydrotreated light distillate .....	64742-47-8	0.001	Toluene
18. Stoddard solvent .....	8052-41-3	0.01	Xylenes
19. Super high-flash naphtha .....	64742-95-6	0.05	Xylenes
20. Varsol® solvent .....	8052-49-3	0.01	0.5% xylenes, 0.5% ethylbenzene
21. VM & P naphtha .....	64742-89-8	0.06	3% toluene, 3% xylene
22. Petroleum distillate mixture .....	68477-31-6	0.08	4% naphthalene, 4% biphenyl

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data.

TABLE 4 TO SUBPART MMMM OF PART 63.—DEFAULT ORGANIC HAP MASS FRACTION FOR PETROLEUM SOLVENT GROUPS<sup>a</sup>

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

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

<sup>b</sup> e.g., Mineral Spirits 135, Mineral Spirits 150 EC, Naphtha, Mixed Hydrocarbon, Aliphatic Hydrocarbon, Aliphatic Naphtha, Naphthol Spirits, Petroleum Spirits, Petroleum Oil, Petroleum Naphtha, Solvent Naphtha, Solvent Blend.

<sup>c</sup> e.g., Medium-flash Naphtha, High-flash Naphtha, Aromatic Naphtha, Light Aromatic Naphtha, Light Aromatic Hydrocarbons, Aromatic Hydrocarbons, Light Aromatic Solvent.

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