ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[OAR–2003–0116–FRL–7549–7]

RIN 2060–AG56

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

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates 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 final rule implements 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 final rule will protect air quality and promote the public health by reducing emissions of HAP from facilities in the miscellaneous metal parts and products surface coating source category. The organic HAP emitted by these operations include xylenes, toluene, methyl ethyl ketone (MEK), phenol, cresols/cresylic acid, glycol ethers (including ethylene glycol monobutyl ether (EGBE)), styrene, methyl isobutyl ketone (MIBK), and ethyl benzene. Exposure to these substances has been demonstrated to cause adverse health effects such as irritation of the lung, skin, and mucous membranes, and effects on the central nervous system, liver, and heart. In general, these findings have only been shown with concentrations higher than those typically in the ambient air. The final standards are expected to reduce nationwide organic HAP emissions from major sources in this source category by approximately 48 percent.

EFFECTIVE DATES: The final rule is effective January 2, 2004. The incorporation by reference of certain publications listed in the final rule is approved by the Director of the Federal Register as of January 2, 2004.

ADDRESSES: *Docket.* Docket ID No. OAR–2003–0116 (formerly Docket No. A–97–34) is located at the EPA Docket Center, EPA West (6102T), 1301 Constitution Avenue, NW., Room B–102, Washington, DC 20460.

Background Information Document. A background information document (BID) for the promulgated NESHAP may be obtained from the docket; the U.S. EPA Library (C267–01), Research Triangle Park, NC 27711, telephone (919) 541–2777; or from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, telephone (703) 487–4650. Refer to ‘‘National Emission Standards for Hazardous Air Pollutants (NESHAP): Surface Coating of Miscellaneous Metal Parts and Products—Summary of Public Comments and Responses on Proposed Rule’’ (EPA–453/R–03–008).

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 address: *teal.kim@epa.gov.*

SUPPLEMENTARY INFORMATION: *Regulated Entities.* The source category definition includes facilities that apply coatings to miscellaneous metal parts and products. In general, facilities that coat miscellaneous metal parts and products are covered under the North American Industrial Classification System (NAICS) codes listed in Table 1. However, facilities classified under other NAICS codes may be subject to the final standards if they meet the applicability criteria. Not all facilities classified under the NAICS codes in the following table will be subject to the final standards because some of the classifications cover products outside the scope of the NESHAP for miscellaneous metal parts and products.

TABLE 1.—CATEGORIES AND ENTITIES POTENTIALLY REGULATED BY THE FINAL RULE

Category	NAICS	Examples of potentially regulated entities
Automobile Parts	335312, 336111, 336211, 336312, 33632, 33633, 33634, 33637, 336399.	Engine parts, vehicle parts and accessories, brakes, axles, etc.
Extruded Aluminum	331316, 331524, 332321, 332323	Extruded aluminum, architectural components, rod, and tubes.
Heavy Equipment	33312, 333611, 333618	Tractors, earth moving machinery.
Job Shops	332312, 332722, 332813, 332991, 332999, 334119, 336413, 339999.	Any of the products from the miscellaneous metal parts and products segments.
Large Trucks and Buses	33612, 336211	Large trucks and buses.
Magnet Wire	331319, 331422, 335929	Magnet wire.
Metal Buildings	332311	Prefabricated metal: buildings, carports, docks, dwellings, greenhouses, panels for buildings.
Metal Containers	33242, 81131, 322214, 326199, 331513, 332439	Drums, kegs, pails, shipping containers.
Metal Pipe and Foundry	331111, 331513, 33121, 331221, 331511	Plate, tube, rods, nails, spikes, etc.
Rail Transportation	33651, 336611, 482111	Brakes, engines, freight cars, locomotives.
Recreational Vehicles	3369, 331316, 336991, 336211, 336112, 336213, 336214, 336399.	Motorcycles, motor homes, semitrailers, truck trailers.
Rubber-to-Metal Products.	326291, 326299	Engine mounts, rubberized tank tread, harmonic balancers.
Structural Steel	332311, 332312	Joists, railway bridge sections, highway bridge sections.
Other Transportation Equipment.	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 final rule.

Docket. The EPA has established an official public docket for this action under Docket ID No. OAR–2003–0116 (formerly docket A–97–34). The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. Although a part of the official docket, the public docket does not include

Confidential Business Information or other information whose disclosure is restricted by statute. The official public docket is the collection of materials that is available for public viewing at the EPA Docket Center, EPA West, Room B–102, 1301 Constitution Avenue, NW., Washington, DC 20460. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742. A reasonable fee may be charged for copying docket materials.

Electronic Docket Access. You may access this **Federal Register** document electronically through the EPA Internet under the ''**Federal Register**'' listings at *http://www.epa.gov/fedrgstr*.

An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at *http://www.epa.gov/edocket/* to view public comments, access the index listing of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility identified above. Once in the system, select ''search,'' then key in the appropriate docket identification number.

WorldWide Web (WWW). In addition to being available in the docket, an electronic copy of the final rule will be available on the WWW. Following the Administrator's signature, a copy of the final rule will be posted at *http://www.epa.gov/ttn/oarpg* on EPA's Technology Transfer Network (TTN) policy and guidance page for newly proposed or promulgated rules. 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.

Judicial Review. Under section 307(b)(1) of the CAA, judicial review of the final rule is available only by the filing of a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by March 2, 2004. Under section 307(d)(7)(B) of the CAA, only an objection to the rule that was raised with reasonable specificity during the period for public comment can be raised during judicial review. Under section 307(b)(2) of the CAA, the requirements established by the final rule may not be challenged separately in any civil or criminal proceedings brought by EPA to enforce these requirements.

Outline: The following outline is provided to aid in reading the preamble to the final rule:

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 considering controls 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(c)(2) of the CAA requires that we establish NESHAP for the control of HAP from both new and existing major sources, based upon the criteria set out in section 112(d). The CAA requires the NESHAP to reflect the maximum degree of reduction in emissions of HAP that is achievable, taking into consideration the cost of achieving the emission reduction, any non-air quality health and environmental impacts, and energy requirements. This level of control is commonly referred to as 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 the final NESHAP, we considered control options that are more stringent than the MACT floor, taking into account consideration of the cost of achieving the emission reduction, any non-air quality health and environmental impacts, and energy requirements. In the final rule, EPA is promulgating standards for both existing and new sources consistent with these statutory requirements.

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

The final NESHAP regulate emissions of organic HAP. Available emission data collected during the development of the final NESHAP show that the primary organic HAP emitted from the surface coating of miscellaneous metal parts and products include xylenes, toluene, MEK, phenol, cresols/cresylic acid, glycol ethers (including EGBE), styrene, MIBK, and ethyl benzene. These compounds account for approximately 90 percent of this category's nationwide organic HAP emissions.

The majority of organic HAP emissions from a facility engaged in miscellaneous metal parts and products surface coating operations can be attributed to the application, drying, and curing of coatings. The remaining emissions are primarily from cleaning operations. In most cases, organic HAP emissions from mixing, storage, and waste handling 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, including paint stripping, 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 are other sources of emissions. Organic HAP emissions can 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.

D. What Are the Health Effects Associated With Organic HAP Emissions From the Surface Coating of Metal Parts and Products?

The HAP to be controlled with the final 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 mucous 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 these 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 organic 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 final rule will reduce emissions and subsequent exposures.

II. Summary of the Final Rule

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

The final rule applies to you if you own or operate a miscellaneous metal parts and products surface coating facility that is a major source, or is located at a major source, or is part of a major source of HAP emissions. We define a miscellaneous metal parts and products surface coating facility as any facility engaged in the surface coating of any miscellaneous metal part or product. If application of coating to a substrate occurs, then surface coating also includes associated activities, such as surface preparation, cleaning, mixing, and storage. However, these associated activities do not comprise surface coating if the application of coating does not occur. Coating application with handheld, non-refillable aerosol containers, touch-up markers, marking pens, or the application of paper film or plastic film which may be pre-coated with an adhesive by the manufacturer is not a coating operation for the purposes of the final rule.

You will not be subject to the final 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 final rule does not apply to surface coating or a coating operation that meets any of the criteria listed below:

- A coating operation conducted at a source where the source uses only coatings, thinners and/or other additives, and cleaning materials that contain no organic HAP, as determined according to the procedures in the final rule.
- Surface coating that occurs at research or laboratory facilities, or is part of janitorial, building, and facility maintenance operations, or that occurs at hobby shops operated for noncommercial purposes.
- Coatings used in volumes of less than 189 liters (50 gallons (gal)) per year, provided that the total volume of coatings exempt does not exceed 946 liters (250 gal) per year at the facility.
- Surface coating of metal parts and products performed on-site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State) or the National Aeronautics and Space Administration (NASA), or the surface coating of military munitions manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State).
- Surface coating where plastic is extruded onto metal wire or cable or metal parts or products to form a coating.

- Surface coating of metal components of wood furniture that meet the applicability criteria for wood furniture manufacturing (40 CFR part 63, subpart JJ).
- Surface coating of metal components of large appliances that meet the applicability criteria for large appliance surface coating (40 CFR part 63, subpart NNNN).
- Surface coating of metal components of metal furniture that meet the applicability criteria for metal furniture surface coating (40 CFR part 63, subpart RRRR; 68 FR 28606, May 23, 2003).
- Surface coating of metal components of wood building products that meet the applicability criteria for wood building products surface coating (40 CFR part 63, subpart QQQQ; 68 FR 31746, May 28, 2003).
- Surface coating of metal components of aerospace vehicles that meet the applicability criteria for aerospace manufacturing and rework (40 CFR part 63, subpart GG).
- The application of specialty coatings defined in appendix A to 40 CFR part 63, subpart GG to a metal aerospace vehicle or component.
- Surface coating of metal components of ships that meet the applicability criteria for shipbuilding and ship repair (40 CFR part 63, subpart II).
- Surface coating of metal using a web coating process that meets the applicability criteria for paper and other web coating (40 CFR part 63, subpart JJJJ).
- Surface coating of metal using a coil coating process that meets the applicability criteria for metal coil coating (40 CFR part 63, subpart SSSS).
- Surface coating of boats or metal parts of boats (including, but not limited to, the use of assembly adhesives) where the facility meets the applicability criteria for boat manufacturing facilities in the NESHAP for boat manufacturing (40 CFR part 63, subpart VVVV), except where the surface coating of the boat is a metal coating operation performed on personal watercraft or parts of personal watercraft.
- Surface coating of assembled on-road vehicles that meet the applicability criteria for the assembled on-road vehicle subcategory in the NESHAP for the surface coating of plastic parts and products (40 CFR part 63, subpart PPPP).
- Surface coating of metal components of automobiles and light-duty trucks that meet the applicability criteria for automobiles and light-duty trucks surface coating (40 CFR part 63, subpart IIII (scheduled for promulgation in February 2004).

If you perform surface coating of metal parts or products that meet the applicability criteria for both the Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII (scheduled for promulgation in February 2004) and these NESHAP, then you may comply with the requirements of the automobiles and light-duty trucks NESHAP for the surface coating of all your metal parts used in automobile or light-duty truck manufacturing in lieu of complying with each subpart separately.

The final rule contains five subcategories: General use coating, high performance coating, magnet wire coating, rubber-to-metal coating, and extreme performance fluoropolymer coating. The general use subcategory includes all surface coating operations in the miscellaneous metal parts and products source category that are not included in the other four subcategories. This includes operations that coat a wide variety of substrates, surfaces, and types of miscellaneous metal parts and products. It also includes asphalt/coal tar application to metal pipes. High performance coating is any coating that meets the definition of ‘‘high performance architectural coating’’ or ‘‘high temperature coating.’’ Magnet wire coatings, commonly referred to as magnet wire enamels, are applied to a continuous strand of wire which will be used to make turns (windings) in electrical devices such as coils, transformers, or motors. Magnet wire coatings provide high dielectric strength and turn-to-turn conductor insulation. This allows the turns of an electrical device to be placed in close proximity to one another which leads to increased coil effectiveness and electrical efficiency. Rubber-to-metal coating is any coating that contains heat-activated polymer systems in either solvent or water that, when applied to metal substrates, dries to a non-tacky surface and reacts chemically with the rubber and metal during a vulcanization process. Extreme performance fluoropolymer coating is a coating based on fluoropolymer resins that typically meets one or more performance criteria that include a nonstick low-energy surface, dry film lubrication, high resistance to chemical attack, extremely wide operating temperature, high electrical insulating properties, or that complies with government or third party specifications for health, safety, reliability, or performance. Each subcategory consists of all coating operations, including associated surface preparation, equipment cleaning, mixing, storage, and waste handling.

B. What Is the Relationship to Other Rules?

Affected sources that meet the applicability criteria in the final miscellaneous metal parts and products rule may also meet the applicability criteria of other coating NESHAP. For example, some facilities that coat plastic and metal parts using the same or different coatings, coating application processes, and conveyance equipment, either simultaneously or at alternative times could be subject to both the Miscellaneous Metal Parts and Products Surface Coating NESHAP and the Plastic Parts and Products Surface Coating NESHAP (40 CFR part 63, subpart PPPP).

In the final rule, we have minimized the burden of complying with multiple surface coating emission limits by offering two alternatives to complying separately with each applicable emission limit. The first alternative allows a facility to have all applicable surface coating operations comply with the emission limit that represents the predominant type of coating activity at that facility. Predominant activity means the coating activity that represents 90 percent or more of the surface coating activities at a facility. For example, if a facility is subject to both the Plastic Parts and Miscellaneous Metal Parts NESHAP and the activities subject to the Miscellaneous Metal Parts NESHAP account for 90 percent or more of the surface coating activity at the facility, then the facility may comply with the emission limitations for miscellaneous metal parts and products for both types of surface coating operations.

The predominant activity alternative may be applied if 90 percent or more of the surface coating is in the general use or magnet wire coating subcategory; however, this alternative is not available where high performance, rubber-to-metal, or extreme performance fluoropolymer coating represents the predominant activity. The emission limits for those three subcategories reflect specialized performance requirements and the need for higher HAP-containing materials. It would not be appropriate to apply emission limits specifically developed for unique performance characteristics to other types of coatings.

You must include all surface coating activities that meet the applicability criteria of a subcategory in a surface coating NESHAP and constitute more than 1 percent of total coating activities. Coating activities that meet the applicability criteria of a subcategory in a surface coating NESHAP but comprise less than 1 percent of total coating activities need not be included in the determination of predominant activity but they must be included in the compliance calculations.

The second alternative allows a facility to calculate and comply with a facility-specific emission limit for each 12-month rolling average compliance period. The facility would use the relative amount of coating activity subject to each emission limit in each NESHAP to calculate a weighted, or composite, emission limit for that facility. Compliance with that facility-specific emission limit for all surface coating activities included in the facility-specific emission limit constitutes compliance with the emission limits in the Miscellaneous Metal Parts NESHAP, as well as other applicable NESHAP. As with the predominant activity alternative, you must include all surface coating activities that meet the applicability criteria of a subcategory in a surface coating NESHAP and constitute more than 1 percent of total coating activities. Coating activities that meet the applicability criteria of a subcategory in a surface coating NESHAP but comprise less than 1 percent of total coating activities need not be included in the facility-specific emission limit calculation but they must be included in the compliance calculations.

C. 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 final rule defines the affected source as the collection of all operations associated with the surface coating of miscellaneous metal parts and products within each of the five subcategories (general use, high performance, magnet wire, rubber-to-metal, and extreme performance fluoropolymer). If application to a substrate occurs, 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 and the use of a cleaning material to remove dried 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/or other additives, 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 nonrefillable aerosol containers, touch-up markers, marking pens, or the application of paper film or plastic film that may be pre-coated with an adhesive by the manufacturer.

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

Emission Limits. We are limiting organic HAP emissions from each existing affected source using the emission limits in Table 2 of this preamble. For each new or reconstructed affected source, the final emission limits are given in Table 3 of this preamble. For each of the subcategories, the emission limit is expressed as the mass of organic HAP emissions per volume of coating solids used during each 12-month compliance period.

TABLE 2.—EMISSION LIMITS FOR EXISTING AFFECTED SOURCES

Coating type	Emission limit (kilograms HAP/liter of coating solids)	Emission limit (lbs HAP/gal of coating solids)
General use subcategory	0.31	2.6
High performance subcategory	3.3	27.5
Magnet wire subcategory	0.12	1.0
Rubber-to-metal subcategory	4.5	37.7
Extreme performance fluoropolymer subcategory	1.5	12.4

TABLE 3.—EMISSION LIMITS FOR NEW AND RECONSTRUCTED AFFECTED SOURCES

Coating type	Emission limit (kilograms HAP/liter of coating solids)	Emission limit (lbs HAP/gal of coating solids)
General use subcategory	0.23	1.9
High performance subcategory	3.3	27.5
Magnet wire subcategory	0.050	0.44
Rubber-to-metal subcategory	0.81	6.8
Extreme performance fluoropolymer subcategory	1.5	12.4

You may choose from several compliance options in the final rule to achieve the emission limits. You could comply by applying materials (coatings, thinners and/or other additives, 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 operating limits 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 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 establish limits on average facial velocity or pressure drop across openings in the enclosure.

For thermal oxidizers, you monitor the combustion temperature. For catalytic oxidizers, you monitor the temperature immediately before and after the catalyst bed, or you monitor the temperature before or after the catalyst bed and implement a site-specific inspection and maintenance plan for the catalytic oxidizer. For regenerative carbon adsorbers for which you do not conduct a liquid-liquid material balance, you monitor the carbon bed temperature and the amount of steam or nitrogen used to desorb the bed. For condensers, you monitor the outlet gas temperature from the condenser. For concentrators, you monitor the temperature of the desorption gas stream and the pressure drop across the concentrator.

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 must 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 and/or other additives, cleaning materials, and waste materials. If your affected source has an existing documented plan that incorporates steps taken to minimize emissions from the aforementioned sources, you may be able to use your existing plan to satisfy the requirement for a work practice plan.

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

The NESHAP General Provisions (40 CFR part 63, subpart A) codify certain procedures and criteria for all 40 CFR part 63 NESHAP and apply to you as indicated in the final rule. 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 final rule refers to individual sections of the General Provisions to emphasize key sections that are relevant. However, unless specifically overridden in the final rule, all of the applicable General Provisions requirements apply to you.

E. What Are the Testing and Initial Compliance Requirements?

Existing affected sources must be in compliance with the final rule no later than January 2, 2007. New and reconstructed sources must be in compliance upon initial startup of the affected source or by January 2, 2004, whichever is later. However, affected sources are not required to demonstrate compliance until the end of the initial compliance period when they will have accumulated the necessary records to document the rolling 12-month organic HAP emission rate.

Compliance with the emission limits is based on a rolling 12-month organic HAP emission rate determined each month. Each 12-month period is a compliance period. The initial compliance period, therefore, is the 12-month period beginning on the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period begins on the compliance date and extends through the end of that month plus the following 12 months. In other words, the initial compliance period could be almost 13 months long, but all subsequent compliance periods will be 12 months long. 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 final emission limitations during the initial compliance period. However, they will not have accumulated the records for the rolling 12-month organic HAP emission rate until the end of the initial compliance period. At the end of the initial compliance period, the owner or operator uses the data and records generated to determine whether or not the affected source is in compliance with the organic HAP emission limit and other applicable requirements for that period. If the affected source does not meet the applicable limit and other requirements, it is out of compliance for the entire compliance period.

Emission Limits. There are three options for complying with the final emission limits, and the testing and initial compliance requirements vary accordingly. You may choose to use one compliance option for the entire affected source, or you may use different compliance options for different coating operations within the affected source. You may also use different compliance options for the same coating operation at different times, different compliance options when different coatings are applied to the same part, or when the same coating is applied to different parts. However, you may not use different compliance options at the same time on the same coating operation.

Option 1: Compliant materials. This option is a pollution prevention option that allows you to easily demonstrate compliance by using low-HAP or non-HAP coatings and other materials. If you use coatings that, based on their organic HAP content, individually meet the kilogram (kg) (lb) organic HAP emitted per liter (gal) coating solids used levels in the applicable emission limits and you use non-HAP thinners and other additives and cleaning materials, this compliance option is available to you. For this option, we have minimized recordkeeping and reporting requirements. You may demonstrate compliance by using manufacturer’s formulation data and readily available purchase records to determine the organic HAP content of each coating or other material and the amount of each material used. You do not need to perform any detailed emission rate calculations.

If you demonstrate compliance based on the coatings and other materials used, you demonstrate that the organic HAP content of each coating meets the emission limits for the appropriate subcategory as shown in Tables 2 and 3 of this preamble, and that you used no organic HAP-containing thinners and/or other additives, or cleaning materials. For example, if you are using the compliant materials option and your existing source has magnet wire, rubber-to-metal, extreme performance fluoropolymer, and general use coating operations, you demonstrate that: (1) Each coating used in the magnet wire coating operation has an organic HAP content no greater than 0.12 kg organic HAP/liter coating solids (1.0 lb organic HAP/gal coating solids) used; (2) each coating used in the rubber-to-metal coating operation has an organic HAP content no greater than 4.5 kg organic HAP/liter coating solids (37.7 lbs organic HAP/gal coating solids) used; (3) each coating used in the extreme performance fluoropolymer coating operation has an organic HAP content no greater than 1.5 kg organic HAP/liter coating solids (12.4 lbs HAP/gal coating solids) used; (4) each general use coating has an organic HAP content no greater than 0.31 kg organic HAP/liter coating solids (2.6 lbs HAP/gal coating solids) used; and (5) that you used no organic HAP-containing thinners and/or other additives, or cleaning materials. Note that ‘‘no organic HAP’’ is not intended to mean absolute zero. Materials that contain ‘‘no organic HAP’’ means materials that contain organic HAP levels below the levels specified in § 63.3941(a) of the final rule, which are typical Occupational

Safety and Health Administration (OSHA) reporting levels for material safety data sheets. These typical reporting levels only count organic HAP that are present at 0.1 percent or more by mass for OSHA-defined carcinogens and at 1.0 percent or more by mass for other compounds.

To determine the mass of organic HAP in coatings, thinners and/or other additives, and cleaning materials and the volume fraction of coating solids, you may rely on manufacturer's formulation data. You are not required to perform tests or analysis of the material if formulation data are available. Alternatively, you could use results from the test methods listed below. You may also 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 prevail for compliance and enforcement purposes, unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

The following test methods are used to determine HAP content. For organic HAP content, use Method 311 of 40 CFR part 63, appendix A. You may also use nonaqueous volatile matter as a surrogate for organic HAP, which includes all organic HAP plus all other organic compounds, excluding water. If you choose this option, use Method 24 of 40 CFR part 60, appendix A. If you are determining HAP content for reactive adhesives (that is, adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere), you may use the alternative to Method 24 that is included in 40 CFR part 63, subpart PPPP, appendix A. For determining volume fraction of coating solids, use ASTM Method D2697–86 (Reapproved 1998), ''Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings,'' or ASTM Method D6093–97 (Reapproved 2003), ''Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer,'' an approved alternative method, or calculations based on the volume of the volatile fraction.

Option 2: Compliance based on the emission rate without add-on controls. This option is a pollution prevention option that allows you to demonstrate compliance based on the organic HAP contained in the mix of coatings, thinners and/or other additives, and cleaning materials you use. This option offers the flexibility to use some individual coatings that do not, by themselves, meet the kg (lb) organic HAP emitted per liter (gal) coating solids used levels in the applicable emission limits if you use other low-HAP or non-HAP coatings such that overall emissions from the affected source over a 12-month period meet the emission limits. You must use this option if you use HAP-containing thinners and/or other additives, and cleaning materials and do not have add-on controls. You keep track of the mass of organic HAP in each coating, thinner or other additive, and cleaning material, and the amount of each material you use in your affected source each month of the compliance period. You use this information to determine the total mass of organic HAP in all coatings, thinners and/or other additives, and cleaning materials divided by the total volume of coating solids used during the compliance period. You demonstrate that your emission rate (in kg (lb) organic HAP emitted per liter (gal) coating solids used) meets the applicable emission limit. You may use readily available purchase records and manufacturer's formulation data to determine the amount of each coating or other material you used and the organic HAP in each material. The final rule contains equations that show you how to perform the calculations to demonstrate compliance.

If you demonstrate compliance using Option 2, you are required to:

- Determine the quantity of each coating, thinner and/or other additive, and cleaning material used.
- Determine the mass of organic HAP in each coating, thinner and other additive, and cleaning material using the same types of data and methods previously described for Option 1, including the alternative methods for reactive coatings. You may rely on manufacturer's formulation data or you may choose to use test results as described under Option 1.
- Determine the volume fraction of coating solids for each coating using the same types of data or methods described under Option 1. In this option, you may include the solids from powder coatings in the compliance calculations. To determine the volume of solids in powder coatings from their weight, use ASTM Method D5965–02, ''Standard Test Method for Specific Gravity of Coating Powders.''
- Calculate the total mass of organic HAP in all materials and total volume of coating solids used each month. 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 total mass of organic HAP emissions and total volume of coating solids used for the initial compliance period by adding together all the monthly values for mass of organic HAP and for volume of coating solids used for the 12 months of the initial compliance period.
- Calculate the ratio of the total mass of organic HAP emitted for the materials used to the total volume of coating solids used (kg (lb) organic HAP emitted per liter (gal) of coating solids used) for the initial compliance period.
- Record the calculations and results and include them in your Notification of Compliance Status.

Note that if you choose to use this option for a particular coating operation rather than for all coating operations at the source, you calculate the organic HAP emission rate using just the materials used in that operation. Similarly, if your facility has multiple coating operations using this option (*e.g.*, a high performance coating operation, a magnet wire coating operation, a rubber-to-metal coating operation, and a general use coating operation), you do a separate calculation for each coating operation to show that each coating operation meets its emission limit. If you are complying with a facility-specific emission limit, you include all coating operations that are subject to the facility-specific emission limit in the compliance calculations.

Option 3: Compliance based on using a capture system and add-on control device. This option allows sources to use a capture system and an add-on pollution control device, such as a combustion device or a recovery device, to meet the emission limits. While we believe that, based on typical emission characteristics, most sources will not use control devices, we are providing this option for sources that use control devices. Fewer than 10 percent of the existing sources for which we have data use control devices. Under this option, testing is required to demonstrate the capture system and control device efficiencies. Alternatively, you may conduct a liquid-liquid material balance to demonstrate the amount of organic HAP collected by your recovery device. The final rule provides equations showing you how to use records of materials usage, organic HAP contents of each material, capture and control efficiencies, and coating solids content to calculate your emission rate during the compliance period.

If you demonstrate compliance based on this option, you demonstrate that your emission rate considering controls (in kg (lb) organic HAP emitted per liter (gal) of coating solids used) is less than the applicable emission limit. For 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 must be completed no later than the compliance date for existing sources and 180 days after the compliance date for new and reconstructed sources.
- Determine the mass of organic HAP in each coating and other material, and the volume fraction of coating solids for each coating used during each month of the initial compliance period.
- Calculate the total mass of organic HAP in all coatings and other materials, and total volume of coating solids used each month in the controlled operation or group of coating operations. You may subtract from the total mass of organic HAP the amount contained in waste materials you send to a hazardous waste treatment, storage, and disposal facility regulated under 40 CFR part 262, 264, 265, or 266.
- Calculate the organic HAP emissions from the controlled coating operations each month 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 that month.
- Calculate the total mass of organic HAP emissions and total volume of coating solids used for the initial compliance period by adding together all the monthly values for mass of organic HAP emissions and for volume of coating solids for the 12 months in the initial compliance period.
- Calculate the ratio of the total mass of organic HAP emissions to the total volume of coating solids used during the initial compliance period.
- Record the calculations and results and include them in your Notification of Compliance Status.
- Develop and implement a work practice plan to minimize emissions from storage, mixing, and handling of organic HAP-containing materials.

Note that if you choose to use this option for a particular coating operation rather than for the entire affected source, you calculate the organic HAP emission rate using just the materials used in that operation. Similarly, if your facility has multiple coating operations using this option (*e.g.*, a high performance coating operation, a rubber-to-metal coating operation, an extreme performance fluoropolymer coating operation, and a general use coating operation), you do a separate calculation for each coating operation to show that each coating operation meets its emission limit. If you are complying with a facility-specific emission limit, you would include all coating operations that are subject to the facility-specific emission limit in the compliance calculations.

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 use specified test methods to 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 final 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 assume 100 percent capture. Magnet wire coating operations may, with approval, conduct representative capture efficiency testing of one magnet wire coating machine out of a group of identical or very similar magnet wire coating machines rather than testing every individual magnet wire coating machine.

To determine the emission reduction efficiency of the control device, you conduct measurements of the inlet and outlet gas streams. The test consists 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.

An alternative procedure is provided in appendix A of the final rule for determining the destruction efficiency of oxidizers used to control emissions from magnet wire coating machines. This procedure uses material consumption and material organic volatile content, adjusted to account for any uncaptured emissions, to determine the organic volatile content of the inlet stream to the control device. Magnet wire coating operations may, with approval, conduct representative control device efficiency testing of one magnet wire coating machine out of a group of identical or very similar magnet wire coating machines rather than testing every individual magnet wire coating machine.

If you use a solvent recovery system, you could choose to 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 are required to measure the amount of all materials used in the controlled coating operations served by the solvent recovery system during each month of the initial compliance period, and to determine the total volatile matter contained in these materials. You also measure the amount of volatile matter recovered by the solvent recovery system during each month of the initial compliance period. Then you compare the amount recovered to the amount used to determine the overall control efficiency each month and apply this efficiency to the total mass of organic HAP in the materials used to determine total organic HAP emissions for the month. You total these 12 monthly organic HAP emission values and divide by the total of the 12 monthly values for coating solids used to calculate the emission rate for the 12-month initial compliance period. You record the calculations and results and include them in your Notification of Compliance Status.

Operating Limits. As mentioned above, you 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, conducted under representative conditions, that demonstrated compliance with the emission limits.

The final rule specifies the parameters to monitor for the types of emission control systems commonly used in the industry. You are 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 final rule. If you use control devices other than those identified in the final rule, you 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 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 is the average temperature measured during the performance test and for each consecutive 3-hour period; the average temperature has to be at or above this limit. For catalytic oxidizers, temperature monitors are placed immediately before and after the catalyst bed. The operating limits are the average temperature just before the catalyst bed and the average temperature difference across the catalyst bed during the performance test. For each 3-hour period, the average temperature and the average temperature difference must be at or above these limits. Alternatively, if you develop and implement an inspection and maintenance plan for the catalytic oxidizer, then you are allowed to monitor only the temperature before the catalyst bed and meet only the temperature operating limit before the catalyst bed and are not required to monitor the difference across the bed.

An alternative procedure for monitoring catalytic oxidizers on magnet wire coating machines is provided in appendix A of the final rule. This alternative allows you to develop and implement an inspection and maintenance plan as described in appendix A of the final rule and to measure the temperature either before or after the catalyst bed and compare the measured temperature to the operating limit.

If you use a regenerative carbon adsorber and do not conduct liquid-liquid material balances to demonstrate compliance, you 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 are the carbon bed temperature at the time the carbon bed is returned to service (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 and do not conduct liquid-liquid material balances to demonstrate compliance, you monitor the outlet gas temperature to ensure that the air stream is being cooled to a low enough temperature. The operating limit is the average condenser outlet gas temperature measured during the performance test and for each consecutive 3-hour period, the average temperature must be at or below this limit.

If you use a concentrator, you monitor the temperature of the desorption concentrate stream and the pressure drop across the concentrator. These values must be recorded at least once every 15 minutes. The operating limits must be the 3-hour average temperature (to be met as a minimum) and the 3-hour average pressure drop (to be met as a minimum) measured during the performance test.

For each capture system that is not a permanent total enclosure, you establish operating limits for gas volumetric flow rate or duct static pressure for each enclosure or capture device. The operating limit is 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 requires 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.

An alternative procedure for monitoring capture systems on magnet wire coating machines is provided in appendix A of this rule. This alternative requires you to install an alarm or interlock which will be triggered either when any oven exhaust fan is not operating or the oven is overheating. This alternative also requires you to confirm every 6 months that the oven is operating at negative pressure.

Work Practices. If you use a capture system and control device for compliance, you are 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. This plan must include a description of all steps taken to minimize emissions from these sources (*e.g.*, using closed storage containers, practices to minimize emissions during filling and transfer of contents from containers, using spill minimization techniques, placing solvent-laden cloths in closed containers immediately after use, etc.). You must make the plan available for inspection if the Administrator requests to see it.

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

F. What Are the Continuous Compliance Provisions?

Emission Limits. If you use the compliant materials option (Option 1), you demonstrate continuous compliance if each coating meets the applicable emission limit and you use no organic HAP-containing thinners and/or other additives, or cleaning materials. If you use the emission rate without add-on controls option (Option 2), you demonstrate continuous compliance if, for each 12-month compliance period, the ratio of kg (lb) organic HAP emitted to liter (gal) coating solids used is less than or equal to the applicable emission limit. You follow the same procedures for calculating the organic HAP emitted to coating solids used ratio that you used for the initial compliance period.

For each coating operation on which you use a capture system and control device (Option 3), other than a solvent recovery system for which you conduct a liquid-liquid material balance, you use the continuous parameter monitoring results for the month as part of the determination of 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 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 then apply this percent reduction to the total mass of organic HAP in materials used in the controlled coating operations to determine the emissions from those operations during the month. If there were any deviations from the operating limits during the month or any bypasses of the control device, you account for them in the calculation of the monthly emissions by assuming the capture system and control device were achieving zero emission reduction during the periods of deviation, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device, and the use of these data is approved by your permitting authority. Determine the organic HAP emission rate by dividing the total mass of organic HAP emissions for the 12-month compliance period by the total volume of coating solids used during the 12-month compliance period. Every month, you calculate the emission rate for the previous 12-month period.

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

Operating Limits. If you use a capture system and control device, the final rule requires 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 with bypass lines that could allow emissions to bypass the control device, you demonstrate that captured organic HAP emissions 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 five monitoring procedures:

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

A deviation would occur for any period of time the bypass monitoring indicates that emissions are not routed to the control device.

Work Practices. If you use an emission capture system and control device for compliance, you are required to implement, on an ongoing basis, the work practice plan you developed during the initial compliance period. If you did not develop a plan for reducing organic HAP emissions or you do not implement the plan, this would be a deviation from the work practice standard.

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

G. 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 final 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 you own or operate an existing affected source, 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 publication of the final rule in the **Federal Register**. For new and reconstructed sources, you must send the notification within 120 days after the date of initial startup 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 affected source that is subject to the final standards or that you have constructed a new affected source. Thus, it allows you and the permitting authority to plan for compliance activities. You also need to send a notification of planned construction or reconstruction of a source that would be subject to the final 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 must conduct a performance test. The performance test is required no later than the compliance date for an existing affected source. For a new or reconstructed affected source, the performance test is required no later than 180 days after startup or 180 days after **Federal Register** publication of the final rule, whichever is later. You must notify EPA (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.

Notification of Compliance Status. You must submit a Notification of Compliance Status within 30 days after the end of the initial 12-month compliance period. In the notification, you must certify whether each affected source has complied with the final standards; identify the option(s) you used to demonstrate initial compliance; summarize the data and calculations supporting the compliance demonstration; and provide information on any deviations from the emission limits, operating limits, or other requirements.

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 must also include the measured range of each monitored parameter, 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.

If you are complying with a single emission limit representing the predominant surface coating activity under § 63.3890(c)(1) of the final rule, include all calculations and supporting documentation for the predominant activity determination. If you are complying with a facility-specific emission limit under § 63.3890(c)(2) of the final rule, include the calculation of the facility-specific emission limit and any supporting information.

Recordkeeping Requirements. You must keep records of reported information and all other information necessary to document compliance with the final rule for 5 years. As required under the General Provisions, records for the 2 most recent years must be kept on-site or be readily accessible from the site (for example, by a computer network); 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 or volatile organic matter content and coating solids content (for all compliance options).

- Quantity of the coatings, thinners and/or other additives, and cleaning materials used during each compliance period. If you are using the compliant material option for all coatings at the source, you may maintain purchase records for each material used rather than a record of the volume used.
- For the emission rate (with or without add-on controls) compliance options, calculations of your emission rate for each 12-month compliance period.
- All documentation supporting initial notifications and notifications of compliance status.

If you demonstrate compliance by using a capture system and control device, you must keep records of the following:

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

The final rule requires 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, must be recorded and also reported. A deviation is any instance when any requirement or obligation established by the final rule including, but not limited to, the emission limits, operating limits, and work practice standards, is not met.

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

If you are using the predominant activity or facility-specific emission limit alternative, you must keep the records of the data and calculations needed to determine the predominant activity or to calculate the facility-specific emission limit for your facility.

Periodic Reports. Each reporting year is divided into two semiannual reporting periods. If no deviations occur during a semiannual reporting period, you submit a semiannual report stating that the affected source has been in continuous compliance. If deviations occur, you include them in the report as follows:

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

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

Other Reports. You are required to submit reports for periods of startup, shutdown, or malfunction of the capture system and control device. If the procedures you follow during any startup, shutdown, or malfunction are inconsistent with your SSMP, you report those procedures with your semiannual reports in addition to immediate reports required by 40 CFR 63.10(d)(5)(ii).

III. What Are the Significant Differences From Proposal?

A. Applicability

We have revised the applicability section to clarify who is subject to the final rule. Specifically, the section includes activities associated with coating operations such as surface preparation, cleaning, mixing, and storage as long as these activities are associated with coating application at the facility.

We have included an extreme performance fluoropolymer coatings subcategory in the final rule. This new subcategory establishes a specific emission limit for coatings that are formulated systems based on fluoropolymer resins, which often contain ''bonding'' matrix polymers dissolved in nonaqueous solvents as well as other ingredients. Extreme performance fluoropolymer coatings are typically used when one or more critical performance criteria are required including, but not limited to, a nonstick low-energy surface, dry film lubrication, high resistance to chemical attack, extremely wide operating temperature, high electrical insulating properties, or that the surface complies with government (*e.g.*, U.S. Department of Agriculture, Food and Drug Administration (FDA)) or third party specifications for health, safety, reliability, or performance.

We have revised the scope of the high performance subcategory to remove ''military combat, tactical, and munitions coating'' from the definition of high performance coating. As indicated in this preamble, the surface coating of metal parts and products performed on-site at installations owned or operated by the Armed Forces of the United States, or the surface coating of military munitions manufactured by or for the Armed Forces of the United States, will be addressed in the NESHAP for defense land systems and miscellaneous equipment that is currently under development.

We have clarified that when determining whether your facility is below the applicability threshold, you may exclude coatings that meet the definition of non-HAP coating when determining whether you use 946 liters (250 gal) per year, or more, of coatings in the surface coating of miscellaneous metal parts and products (§ 63.3881(b) of the final rule). Thus, a facility using mostly non-HAP coatings and less than 250 gal per year of HAP-containing coatings will not be subject to the final rule. In addition, we have included a definition of ''non-HAP coating'' in the final rule.

B. Scope of Category

We have clarified the scope of the final rule to exclude surface coating operations using only coatings, thinners and other additives, and cleaning materials that contain no organic HAP. We also excluded surface coating of metal that is subject to several other NESHAP. We also included a provision that allows sources that meet the applicability criteria of both the final rule and the automobiles and light-duty trucks NESHAP to comply with the automobiles and light-duty trucks NESHAP for all their surface coating operations associated with the manufacturing of automobiles or light-duty trucks in lieu of complying with each subpart separately.

C. Emission Limits

The emission limits remain as proposed, except for the addition of the extreme performance fluoropolymer subcategory, which must limit organic HAP emissions to no more than 1.5 kg organic HAP/liter coating solids (12.4 lbs HAP/gal coating solids) used during each 12-month compliance period.

D. Method for Determining HAP Content

In the final rule, we have included a method for determining the HAP content for reactive adhesives based on the HAP actually emitted, rather than determining the mass fraction of organic HAP in the coatings using Method 311 or Method 24. Facilities may use the alternative method for reactive adhesives contained in appendix A to the final rule for plastic parts and products. In addition, we included a provision for reactive adhesives to allow facilities to rely on manufacturer's data that expressly states the organic HAP mass fraction emitted.

We have included an option to calculate the volume fraction of coating solids based on the mass fraction and density of the volatile compounds in the coating. This method is an alternative to using ASTM Method D2697–86 (Reapproved 1998), ''Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings,'' or ASTM Method D6093–97 (Reapproved 2003), ''Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer,'' to measure the volume solids.

We have also included a method, ASTM Method D5965–02, ''Standard Test Method for Specific Gravity of Coating Powders,'' to determine the density of powder coatings if a facility chooses to include the solids from powder coatings in their compliance calculations.

E. Deviations From Operating Parameters

The proposed rule stated that if your add-on control system deviates from the operating limit specified in Table 1 to subpart MMMM of 40 CFR part 63, 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. We have written the final rule to allow the use of other data to indicate the actual efficiency of the emission capture system and add-on control device, as long as the use of these data is approved by the respective permitting authority.

F. New Alternatives To Facilitate Compliance With Multiple Coating NESHAP and Multiple Emission Limits

The final rule allows facilities subject to more than one surface coating emission limit to comply with each applicable emission limit separately or to adopt one of two alternatives. The first alternative allows all coating operations to comply with the emission limit representing the predominant surface coating activity at the facility (the predominant activity means the surface coating activity representing 90 percent or more of the total surface coating activity). The predominant activity approach is also available for sources that are subject to more than one subcategory emission limit. That is, a source may determine which subcategory represents 90 percent or more of the coating activities that take place at the facility, and then have all coating operations at the facility comply with the emission limit that represents the predominant activity.

The second alternative allows a facility to comply with a facility-specific emission limit calculated from the relative amount of coating activity that is subject to individual emission limits. The facility-specific emission limit may include separate emission limits from one or more applicable NESHAP.

You must include all surface coating activities that meet the applicability criteria of a subcategory in a surface coating NESHAP and constitute more than 1 percent of total coating activities. Coating activities that meet the applicability criteria of a subcategory in a surface coating NESHAP but comprise less than 1 percent of total coating activities need not be included in the facility-specific emission limit calculation but they must be included in the compliance calculations.

Another approach that you may use is the equivalency by permit option in 40 CFR part 63, subpart E (§ 63.94). Under this approach, you may design an emissions control program that is suited for your process or plant as long as you can demonstrate that your program will achieve the same emissions reductions as the NESHAP. You must then work with your State, local, or tribal air pollution control agency to submit an equivalency demonstration. This equivalency demonstration will be reviewed by the appropriate EPA Regional Office. The equivalency demonstration is approved as part of the operating permit approval process. For more information, please see the section 112(l) website at *http://www.epa.gov/ttn/atw/112(l)/112-lpg.html.*

G. Initial and Continuous Compliance Demonstrations for Magnet Wire Sources

In the final rule we have provided alternative testing and monitoring requirements for magnet wire coating operations. These alternative requirements are presented in appendix A to this rule.

An alternative procedure is provided for determining the destruction efficiency of oxidizers used to control emissions from magnet wire coating machines. This procedure uses material consumption and material organic volatile content, adjusted to account for any uncaptured emissions, to determine the organic volatile content of the inlet stream to the control device.

In addition, magnet wire coating operations may, with approval, conduct representative capture efficiency and control device efficiency testing of one magnet wire coating machine out of a group of identical or very similar magnet wire coating machines rather than testing every individual magnet wire coating machine.

An alternative procedure is provided for monitoring capture systems on magnet wire coating machines. This alternative requires you to install an alarm or interlock which will be triggered either when any oven exhaust fan is not operating or the oven is overheating. This alternative also requires you to confirm every 6 months that the oven is operating at negative pressure.

An alternative procedure is provided for monitoring catalytic oxidizers on magnet wire coating machines. This alternative allows you to develop and implement an inspection and maintenance plan as described in appendix A to this rule and to measure the temperature either before or after the catalyst bed and compare the measured temperature to the operating limit. In addition to the inspection and maintenance plan, you must either perform periodic catalyst activity checks, or check the concentration of organic compounds in the oven exhaust.

IV. What Are the Responses to Significant Comments?

For the full set of comment summaries and responses, refer to the BID (''National Emission Standards for Hazardous Air Pollutants: Surface Coating of Miscellaneous Metal Parts and Products,'' August 2003, EPA–453/R–03–008), which contains EPA's responses to each public comment and is available in Docket ID No. OAR–2002–0116 (formerly Docket No. A–97–34).

A. Applicability and Scope of Source Category

Comment: Two commenters requested that powder coatings be specifically excluded from the final rule. One commenter stated that powder coatings typically have no HAP or trace amounts of HAP that would easily comply with the emission limits. One commenter stated that powder coating operations should not be subject to a recordkeeping and reporting burden that would have no resulting environmental benefit. One commenter suggested that including powder coatings would reduce ''expected'' HAP reductions from these NESHAP and that averaging could be limited to liquid coatings only.

Response: Powder coatings are included in the definition of a coating in the final rule. However, if a source is using only powder coating or powder coating and less than 250 gal of HAP-containing coating, it would be excluded from all rule requirements based on the use of non-HAP coating and less than 250 gal of HAP-containing coating. If a source is using greater than 250 gal of HAP-containing coating and also has a powder coating line, it may choose to comply with the compliant material option for the powder coating line. The records necessary to demonstrate compliance with the compliant material option are significantly less than required under one of the emission rate options. Alternatively, if a source chooses to use either of the emission rate options, powder coatings may be included in the compliance calculations for the emission rate options. Inclusion of powder coatings in the compliance calculations was intended to serve as an incentive for sources to use powder coatings in reducing their overall emission level. We expect that increased use of powder coatings will promote this technology as a pollution prevention alternative and will result in greater emission reductions than if powder coatings were specifically excluded from compliance calculations. If a source chooses to omit powder coatings from the compliance calculations, the source could document that the powder coatings are in compliance under the compliant materials option since powder coatings are essentially 100 percent solids.

Comment: Several commenters requested that EPA revise the definition of ''protective oil'' to clarify whether specific materials cited by the commenters are considered protective oils. One commenter requested that EPA revise the definition of protective oil to clarify that protective oils include three specific coatings: temporary protective coatings on metal products to protect them from rust and corrosion during shipment and storage but that leave a soft removable solid film, magnet wire lubrication that is put on the wire before it is wound on a spool and forms a wax film, and bar seal lubrication that prevents hand gloves from sticking to generator parts during taping.

Another commenter requested that EPA modify the definition of protective oil to specifically include carrier solvents. The commenter claimed that skin lubricants used on hypodermic needles do not meet the definition of a coating because they do not cure and form a solid film. The commenter stated that the skin lubricant is a viscous liquid that uses a HAP as a carrier and remains liquid after the HAP evaporates.

Another commenter requested that aqueous-based rust inhibitors should not be considered coatings under the final rule and that this should be clarified in the definition of ''coating.'' The commenter contended that the rule as proposed currently exempts protective oil-type rust inhibitors and should also exempt aqueous-based materials used for the same purpose.

Response: We agree with the commenters that the definition of protective oils should be written to include those oils that include a carrier solvent and that do not form a solid film (*e.g.*, skin lubricants on hypodermic needles). The definition of protective oils has also been written to include magnet wire lubrication and soft temporary protective coatings that are removed prior to installation or further assembly of a part or component. Those materials that do not form a solid film are not typically considered coatings. Aqueous rust inhibitors, which are typically acids or bases, are already excluded from the definition of coating as acids or bases.

We do not feel it is necessary to specifically include bar seal lubricants used to prevent hand gloves from sticking to generator parts during taping. This is a specific process using the bar seal lubricant in a way that qualifies as a protective oil by providing lubrication.

Comment: Two commenters asked for clarification on whether non-HAP coatings should be included in determining whether a facility is subject to the final rule. The commenters noted that § 63.3881(c)(5) of the proposed rule exempts coatings used in amounts of less than 50 gal per year, provided the total amount that is exempt does not exceed 250 gal per year. The commenters asked, for example, whether a facility using 10,000 gal of non-HAP coating and less than 50 gal each of several other HAP-containing coatings totaling less than 250 gal per year would be subject to the final rule.

Response: In response to comment, we have written the final rule to clearly state that the use of non-HAP materials (as defined in the final rule) does not count toward the 250 gal applicability threshold in the final rule. This would avoid a situation where a source would be subject to the final rule even though it was using primarily non-HAP coatings and less than 250 gal per year of HAP-containing coatings. Because the purpose of the final rule is to control HAP, we agree that it is appropriate to consider only HAP-containing coatings in determining whether a source meets the applicability threshold. The final rule includes a definition of non-HAP coating, which is a coating containing less than 0.1 percent by weight of each individual organic HAP that is an OSHA-defined carcinogen and less than 1.0 percent by weight of all other individual HAP.

Comment: Several commenters requested clarification on the exemption for facility maintenance surface coating operations. One commenter requested clarification that surface coating of equipment and tools used to manufacture parts and products are not covered by the final rule. The commenter noted that miscellaneous metal parts and products are defined as including ''industrial machinery'' and ''other industrial products.'' The commenter requested that an additional paragraph be added to § 63.3881(c) of the final rule to clarify that surface coating of manufacturing equipment, metal molds, and tools are not covered except when these tools are sold or otherwise put into interstate commerce. The commenter requested the definition of facility maintenance state that the repair of metal molds is specifically cited as facility maintenance.

A second commenter stated that it is unclear if the rule as proposed applies to refurbishment activities and maintenance coating of existing metal parts, or if the rule as proposed is intended to apply only to ''new'' metal parts produced for sale. The commenter noted that some maintenance activities conducted at facilities include coating metal equipment and parts that are not part of the infrastructure of the affected facility, such as trucks or other transport vessels for raw materials or products.

One commenter requested clarification that coating activities at industrial sites to maintain the structural and operational integrity of process equipment are not covered by the final rule. Many industries coat new and existing support structures, piping, and equipment as part of routine maintenance activities, but they do not produce and coat metal parts for commercial sale.

Two commenters requested that repainting of refillable gas cylinders for the delivery of industrial gases should be considered facility maintenance and not covered by the final rule. One commenter argued that the gas cylinders are transferred back and forth to the customer and that the principal activity of the facility is the delivery of gases and not the repainting of cylinders. Another commenter stated that the final rule should apply only to facilities for which surface coating is the ''principal activity,'' rather than merely discussing this applicability in the preamble.

Another commenter requested the facility maintenance exemption for surface coating on tools and equipment also apply to tools used occasionally off-site. Another commenter requested that EPA expand the definition of facility maintenance to include the fabrication and coating of equipment needed to support the function of the facility (*e.g.*, equipment required for supporting, holding, or reaching aircraft or aircraft parts and components).

Response: The EPA agrees that the surface coating of equipment and tools used by a manufacturing facility (compared to machinery and tools that are sold as industrial products) should be considered part of facility maintenance operations and not part of the miscellaneous metal parts and products surface coating source category. The final rule includes a definition of ''facility maintenance operations'' that includes the routine repair or renovation (including the surface coating) of the tools, equipment, machinery, and structures that comprise the infrastructure of the affected facility. Infrastructure may include buildings, tools, and equipment needed to support the function of the facility that are fixed in place, or are occasionally used off-site.

Since mold release agents are applied to molds and are not applied to the part being produced and do not become part of the part being produced, they would be considered part of facility maintenance and would not be subject to the final rule. However, EPA does not believe it is necessary to specifically include mold release agents in the definition of facility maintenance since they would already be covered as a surface coating applied to the tools and equipment of the affected facility.

The regular painting of gas cylinders is not considered facility maintenance because it is not incidental to the primary activity of a facility delivering specialty gases. The repainting of the cylinders is central to the reliable delivery of industrial gases to customers, even if the cylinders are owned by and returned to the gas vendor. The coating is not episodic or occasional, but is an ongoing operation at the source for which dedicated, fixed machinery and equipment are installed at the source. For these reasons, coating of the cylinders is considered part of the principal activity of the facility, which is providing gas to customers in sound and easily identifiable containers. Facility maintenance activities, including episodic or occasional surface coating, on the other hand, is ancillary or incidental to the principal activity of the facility.

The coating of mobile equipment and fleet trucks is considered part of facility maintenance for the Miscellaneous Metal Parts and Products NESHAP, as long as the coating of mobile equipment and fleet trucks is not one of the principal activities of the source. The routine maintenance of metal parts (such as rail car maintenance and drum refurbishment) is not exempt from the final rule when it is performed at sources for which their principal activity is the routine maintenance, including surface coating, of metal parts that are not new parts.

B. Need for Separate Source Category for Department of Defense Coatings

Comment: One commenter stated that EPA should establish a separate source category for DoD surface coating operations not covered by the Aerospace or the Shipbuilding and Ship Repair NESHAP (40 CFR part 63, subparts GG and II, respectively) and exempt these coating operations from the final rule for miscellaneous metal parts. The commenter described the unique material requirements and operating conditions for military coating operations that are different from commercial operations. The commenter claimed that the proposed compliance options would be impractical and extremely costly for DoD facilities because of the complexity of military coating operations, the number of coatings and solvents used, and the number of different items and substrates coated. Many DoD installations (especially those that service or remanufacture artillery, armored vehicles, weapons systems, and support equipment) use thousands of different coatings, and each material is subject to its own military specification.

Because DoD facilities use HAP-containing solvents, the commenter claimed they could not use the proposed compliant materials option. Reformulating solvents or coatings requires extensive field testing before they may be approved for use in tactical field equipment and weapons systems. In addition, updating the coatings for which there is a military specification requires updating the documentation applicable to military specifications and the documentation for the relevant equipment and weapons systems that adopt those military specifications.

The proposed emission rate option and the add-on controls option are not feasible because they would require DoD to be able to accurately track the amount of coating or cleaning solvent used on each item or substrate. As noted above, DoD installations may use thousands of different coatings on a variety of substrates, including metal, plastic, ceramics, rubber, fabric, wood, and composites.

The commenter requested a separate source category so that emission limits and a regulatory format could be developed that would be most appropriate for military coating needs. The commenter claimed that a separate rule also would ensure that all DoD coatings could comply with emission limits using the same units of measure. The commenter noted that DoD facilities use many of the same high performance coatings on plastic and metal items and substrates, and they could be potentially regulated by both the NESHAP for plastic parts and products and the NESHAP for miscellaneous metal parts and products.

Response: After several visits to DoD surface coating operations and meetings with DoD stakeholders, EPA agrees that a separate source category for DoD surface coating operations is warranted. One factor that we considered in this decision is the unique military specifications for coatings used on tactical and other military equipment. Further data collection and analysis are required to determine what emission limits are achievable for these coating operations. Another factor that we considered is the issue that military facilities may use thousands of different coatings, and that the types of equipment that are coated and the types of coatings used in a given time period are unpredictable and often influenced by world events. Further analysis is needed to determine what emission limit formats, compliance demonstration, and recordkeeping requirements are practical for this type of situation. Another consideration was the high probability that these sources would be subject to multiple NESHAP.

The EPA will be developing separate NESHAP for ''Defense Land Systems and Miscellaneous Equipment'' surface coating operations. Those NESHAP will include operations that do not meet the applicability criteria of the Aerospace NESHAP or the Shipbuilding and Ship Repair NESHAP. The comments pertaining to the format of the standards and appropriate compliance options will be taken into consideration in the development of those NESHAP.

Since a separate source category will be established for DoD surface coating operations, the definition of high performance coating in the final rule has been written so that it does not include ''military combat, tactical, and munitions coating'' and the definition of ''military combat, tactical, and munitions coating'' is not included in the final rule.

C. Exclusion of Activities Subject to Other Surface Coating NESHAP

Comment: Several commenters requested that EPA clarify that the Aerospace NESHAP (40 CFR part 63, subpart GG), rather than the Miscellaneous Metal Parts NESHAP, cover parts necessary for the proper functioning of aircraft. The commenters were concerned in particular that the rule, as proposed, could be interpreted to apply to the specialty coatings included in appendix A to 40 CFR part 63, subpart GG. The commenters stated that the Aerospace NESHAP found that MACT controls were not warranted for certain aerospace surface coating operations and that regulating these operations under the Miscellaneous Metal Parts and Products NESHAP would be an unexplained change in policy.

Another commenter suggested that the final rule include an alternative compliance option for facilities subject to the final NESHAP under development for the surface coating of automobiles and light-duty trucks that also coat metal parts that would not be subject to the Automobiles and Light-Duty Trucks NESHAP. The commenter noted that some automobile and light-duty truck facilities will be subject to the final rule for metal parts coating, the NESHAP for the surface coating of automobiles and light-duty trucks, and the Plastic Parts and Products NESHAP. The commenter suggested that a source be allowed to comply with the final NESHAP for automobiles and light-duty trucks for all coating operations if the principle activity is the surface coating of automobiles and light-duty truck bodies. The commenter noted that the metal and plastic parts coating operations are often integrated with the body coating operations, since all three coating operations may share common coating supplies, application equipment, cleaning solvents, and emission controls. The shared equipment and materials could make tracking separate compliance for each NESHAP overly burdensome and would reduce the certainty of compliance.

One commenter requested that EPA clarify that shipbuilding or ship repair surface coating operations are subject to only the Shipbuilding and Ship Repair NESHAP (40 CFR part 63, subpart II). The commenter noted that the Shipbuilding and Ship Repair NESHAP covers only paints and thinners, and does not cover caulks, sealants, and adhesives. Since the metal parts rule covers all coating materials, the commenter was concerned that it would cover those materials that were not specifically addressed by the Shipbuilding and Ship Repair NESHAP and will make shipbuilding and ship repair sources subject to multiple NESHAP.

Response: We agree with the commenter that coating operations that are addressed in the Aerospace NESHAP, and for which EPA determined that MACT controls were not needed, are not intended to be regulated under the Miscellaneous Metal Parts and Products NESHAP. To clarify this intent, the final miscellaneous metal parts rule includes a provision that specifies that the final rule does not apply to coatings that meet the applicability criteria for the Aerospace NESHAP (40 CFR part 63, subpart GG). In addition, the final rule excludes the application of specialty coatings, as defined in appendix A to subpart GG, to metal parts of aerospace vehicles or components.

The coating of metal parts that would not meet the applicability of the Aerospace NESHAP or that would not require any of the specialty coatings defined in appendix A to 40 CFR part 63, subpart GG would be subject to the miscellaneous metal parts final rule. Information provided during the comment period indicates that any miscellaneous metal coating activities would comprise less than 5 percent of total coating activities at an aerospace facility. Consequently, the facility could elect to comply with the predominant activity compliance alternative to reduce its recordkeeping and reporting burden.

We agree that the final rule for the surface coating of miscellaneous metal parts is not intended to apply to coating operations that meet the applicability criteria of the Shipbuilding and Ship Repair NESHAP. Although the Shipbuilding and Ship Repair NESHAP did not establish emission limits for sealants, caulks, and adhesives used in shipbuilding or ship repair, such types of coatings used for shipbuilding or ship repair operations are more appropriately addressed under the Shipbuilding and Ship Repair NESHAP. The review of the Shipbuilding and Ship Repair NESHAP, required by section 112(d)(6)of the CAA, is an appropriate mechanism for evaluating whether emission limits are needed for sealants, caulks, and adhesives used in shipbuilding or ship repair.

For sources that will be subject to the final Automobiles and Light-Duty Trucks NESHAP, the final miscellaneous metal parts and products rule includes a provision to mitigate the overlap at these facilities. For these metal part surface coating operations, a facility has the option to comply with the requirements of the final Automobiles and Light-Duty Trucks NESHAP as long as the metal parts are for use in automobiles or light-duty trucks.

D. Complying With the Rule Representing the Majority of the Substrate (Plastic or Metal) on Pre-assembled Parts.

Comment: Several commenters supported this provision of the proposed rule while others did not. Several commenters noted that the source would be required to determine every month whether the majority of substrate on pre-assembled parts was metal or plastic based on the coatings applied during the previous 12-month period and argued this would be overly burdensome. Two commenters suggested that because the relative amount of metal and plastic coated could change over time, a facility could potentially fluctuate between applicable NESHAP. Two commenters also suggested that the final rule require facilities to establish whether the majority of surfaces coated are metal or plastic only at the time of their title V permit renewal, rather than on a 12-month rolling basis, to provide stability and reduce recordkeeping burden.

Other commenters claimed that the rule does not adequately address situations where separate plastic and metal parts are coated on the same line. As proposed, separate metal and plastic parts coated on the same line would need to comply separately with the plastic parts and the metal parts rules. The commenters noted that the same coatings and feed systems are often used for both plastic and metal parts on a single line. The commenters recommended that the final rule adopt a ''predominant activity'' concept, whereby the facility could determine the predominant coating activity of a line and then comply with a single NESHAP.

Response: We recognize and appreciate some of the problems that were identified with this approach by the commenters. Although some commenters supported this approach, it is not included in the final rule. The final rule instead offers more practical compliance approaches, including a predominant activity alternative as suggested by some of the commenters.

The predominant activity alternative allows a facility to identify its predominant type of coating activity and comply with the NESHAP or the subcategory emission limit that applies to that activity for all coating operations. The predominant activity is defined as the activity that represents 90 percent or more of the surface coating that occurs at a facility.

We have analyzed the relative differences in emission limits that are included in the predominant activity compliance option, as it would apply to the NESHAP for plastic parts and products and the NESHAP for miscellaneous metal parts and products. We have determined, for certain subcategories, that the environmental impact of complying with the emission limit for the predominant activity is essentially equivalent to complying separately with each emission limit. For other subcategories, the environmental impact could be substantially different. To prevent situations that could lead to substantial emissions increases, the following activities cannot be used as the predominant activity at a facility: high performance, rubber-to-metal, and extreme performance fluoropolymer coatings. Emission limits for these coating operations reflect the need for specialized performance requirements that can currently be accomplished only with materials that contain substantially higher-HAP than materials used at other types of coating operations. It would be inappropriate to allow coating operations that can be performed with lower-HAP materials to comply with substantially higher-HAP emission limits than would otherwise be applicable.

Under the predominant activity alternative, if all coating operations subject to NESHAP comply with the emission limit applicable to the predominant activity, the facility will be considered in compliance with the emission limits otherwise applicable to the minority surface coating operations (*i.e,* those that amount to less than 10 percent of the coating activity).

Another compliance option to eliminate the need to comply with more than one coating NESHAP has also been added to the final rule. This second option allows a facility to calculate and comply with a facility-specific emission limit.

E. Comply With the Most Stringent NESHAP

Comment: Several commenters supported this provision. One commenter agreed that complying with only one NESHAP would prevent excessive monitoring, recordkeeping, and reporting. One commenter suggested that this option would require less recordkeeping than tracking and determining which substrate represents the greatest coating activity.

However, several commenters stated that different units of measure (*e.g.*, lb organic HAP per lb solids versus lb organic HAP per gal solids) make it difficult to determine which surface coating NESHAP among several is more stringent. Additionally, one commenter noted that case-by-case demonstrations of relative stringency based on total estimated annual emissions are difficult because of the different standards and units of measure in the various NESHAP. One commenter noted that when different NESHAP have different methods of compliance demonstration, sources must track and allocate material usage differently for different parts. Cleaning solvents in particular are a problem, since some NESHAP emission limits include cleaning solvents while others impose work practices instead.

One commenter noted that the rule as proposed places the burden on the source to determine the most stringent limit, and that the different units used for different surface coating rules may cause a source to mistakenly fall out of compliance through miscalculation or misunderstanding.

Several commenters suggested options so that sources would not have to determine which rule is most stringent on a case-by-case basis. Some commenters suggested that the relative stringency of different NESHAP should be stated in each rulemaking so that facilities subject to more than one NESHAP do not need to perform a case-by-case determination of which applicable rule is most stringent. Another commenter suggested that the different surface coating rules contain factors or equations so a source could convert emission limits from one unit to another (*e.g.*, lb organic HAP/lb solids to lb organic HAP/gal solids).

One commenter recommended that EPA allow facilities subject to both the Plastic Parts and Products NESHAP and the Miscellaneous Metal Parts and Products NESHAP the option of complying with the standards of their choice since both NESHAP will significantly reduce organic HAP emissions.

Response: Through clarification of the applicability provisions of the final rule, as described in this preamble, we have significantly reduced the potential for sources to be subject to multiple surface coating NESHAP. In addition, EPA is providing in the final rule, the opportunity for a source to determine and comply with a facility-specific weighted emission limit for all coating operations that take place at the source. The emission limit would be weighted according to the relative amount of coatings used that would be subject to separate emission limits. This alternative emission limit may include applicable emission limits from two or more NESHAP.

In calculating the facility-specific emission limit, the basis for the weighting of the individual emission limits must be the volume of coating solids used in each subcategory. The volume coating solids used in the different coating operations may be calculated by a variety of methods, as long as it is accepted by the permitting authority. For example, in some cases a facility that uses the same coating for plastic and metal parts may be able to use the design specifications of the parts coated and the numbers of each type of part coated to calculate the volume of coating solids used for metal and plastic surfaces subject to the individual emission limits. In other situations, actual records of coating usage for each operation may be needed to provide a valid calculation.

In calculating a facility-specific emission limit for operations subject to NESHAP with emission limits in different formats, you will need to convert emission limits to the same format. To do so, you must use a default value for solids density of 10.5 lbs solids per gal solids (1.26 kg solids/liter solids) to convert emission limits in the Plastic Parts and Products NESHAP that are in ''HAP per mass solids'' to the ''HAP per volume solids'' units of the Miscellaneous Metal Parts and Products NESHAP. This default value was calculated from the weighted-average solids density of coatings in the plastic parts survey database and represents the average solids density of plastic parts coatings.

The following example illustrates how the facility-specific emission limit may be used. Assume a facility has three coating operations subject to the following emission limits:

- Plastic parts general use (0.16 lb organic HAP/lb solids);
- Miscellaneous metal parts extreme performance flouropolymer coatings (12.4 lb organic HAP/gal solids); and
- Miscellaneous metal parts general use (2.6 lb organic HAP/gal solids).

The three coating operations used the following volumes of coating solids in the 12 months of the compliance period:

- Plastic parts general use: 40,000 gal solids;
- Miscellaneous metal parts extreme performance flouropolymer coatings: 2,000 gal solids; and
- Miscellaneous metal parts general use: 58,000 gal solids.

First, the plastic parts general use emission limit must be converted to lb organic HAP/gal solids units using the default solids density of 10.5 lb solids per gal solids:

$$\frac{0.16 \text{ lb HAP}}{\text{lb solids}} \times \frac{10.5 \text{ lb solids}}{\text{gal solids}} = \frac{1.7 \text{ lb HAP}}{\text{gal solids}}$$

Next, the facility-specific emission limit is calculated using Equation 1 in § 63.3890 of the final rule:

$$\frac{(1.7)\ (40{,}000)\ +\ (12.4)\ (2{,}000)\ +\ (2.6)\ (58{,}000)}{(40{,}000\ +\ 2{,}000\ +\ 58{,}000)} = \frac{2.4 \text{ lb HAP}}{\text{lb solids}}$$

If all coating operations comply with an emission limit of 2.4 lb organic HAP/gal solids and with the other compliance provisions of the final rule, the facility will be in compliance with the final rule for that compliance period. The calculation must be repeated for each 12-month compliance period. In this example, compliance will also constitute compliance with the Plastic Parts and Products NESHAP for the plastic parts coating operations. The facility may use either the compliant materials option, the emission rate without add-on controls option, or the emission rate with add-on controls option to demonstrate compliance with the facility-specific emission limit.

This approach is consistent with the CAA because the emission limits from which the facility-specific emission limit would be calculated are based on the MACT emission limits for each applicable coating operation. We believe that overall emissions would be essentially the same as if each coating operation were complying separately with each applicable emission limit. The facility-specific emission limit needs to be calculated each month of the 12 month compliance period because of the wide differences in the various emission limits available for inclusion. A relatively small change in the mix of coating operations conducted during a compliance period may have a significant effect on the weighted emission limit. Thus, it would not be appropriate for a facility to establish and maintain a fixed facility-specific emission limit based on historical data or long term projections.

In the final rule, the facility-specific emission limit and predominant activity alternatives provide sources with comprehensive and flexible approaches that will reduce the recordkeeping associated with sources that coat multiple substrates and whose workload could fluctuate over time. These alternatives reduce the likelihood of overlap among multiple surface coating NESHAP.

F. Assembled On-Road Vehicle Coating

Comment: Two commenters recommended that the predominant substrate type on motor homes and other recreational vehicles (RV) be established as the most restrictive substrate type (*i.e.*, plastics). They argued that a single emission limit should be established for coating motor homes and other assembled on-road vehicles (AORV) that reflects the restrictions of the plastic substrate used on the bodies of motor homes and other RV. The commenters argued that the recordkeeping to document the fraction of plastic and metal on RV would be a major challenge because of the different options for each RV that can be chosen by the customer which affect the ratio of metal-to-plastic that is coated on each vehicle.

One commenter requested that the metal parts rule specifically exclude aftermarket repairs and refinishing of heavy duty trucks, buses, and other vehicles. Other commenters requested that the final rule exempt auto refinishing operations and requested that the final rule state that the refinishing of assembled vehicles is covered under the AORV coating subcategory in the Plastic Parts and Products NESHAP. One commenter also requested that the AORV subcategory in the plastic parts rule, and not the miscellaneous metal parts rule, apply to vehicle parts that are separate from the assembled vehicle at the time of coating application, if the part is eventually to be incorporated into the vehicle. The commenter reasoned that emissions from such operations are negligible in comparison to overall refinish coating emissions, and tremendous costs would be involved with having to reformulate all the colors required to color match under two different regulatory limits and units of measure.

Response: We agree that a single emission limit should apply to all surface coating operations on motor homes and other fully assembled vehicles. Even though fully assembled vehicles may contain a mix of plastic and metal substrates, the majority of the surface coatings applied to the vehicle are automotive-type refinish coatings. In the proposed rule for plastic parts and product surface coating (40 CFR part 63, subpart PPPP; 67 FR 72276, December 4, 2002), we proposed an emission limit for an AORV surface coating subcategory, and an emission limit for that subcategory has been included in the final plastic parts rule.

The AORV subcategory in the final plastic parts rule includes all surface coating operations (regardless of the relative amount of metal and plastic) on fully assembled vehicles, including, for example, motor homes and other RV, refinishing of cars and trucks following body repair, and the painting of fleet trucks. Surface coating operations that are subject to the AORV surface coating emission limit in the plastic parts rule are not subject to any of the emission limits in the miscellaneous metal parts and products rule. These include incidental coating of parts that have been removed from the vehicle, such as grille fronts, to facilitate access and coverage.

G. The MACT Floor Approach and Database

Comment: Several commenters supported the approach of using State volatile organic compounds (VOC) rules to develop the MACT floor. Some found the VOC rules to be a good indicator of HAP emissions and to represent emission levels that have been shown to be achievable for the range of sources in the category and supported the assumptions made by EPA in that approach. However, one commenter contended that EPA improperly used State VOC emission limits instead of levels ''actually achieved'' by the best performing 12 percent of sources to set the MACT floor. The commenter argued that one legal precedent (*Sierra Club* v. *U.S. EPA*, 167 F.3d 658, 664 D.C. Cir. 1999) has found that the use of regulatory permit data in place of actual performance data is only permissible for setting a MACT floor when a rational relationship exists between permitted emissions and actual emissions. The commenter argued that a significant difference existed between the allowable VOC emissions under State rules and actual HAP emissions of the best performing facilities because EPA improperly assumed that all facilities operated at the allowable VOC level in the State rules. That is, EPA assumed that VOC emissions were no lower than the State VOC limits.

In place of using State VOC rules, the commenter argued that EPA should use the average emission rate of 0.1 lb organic HAP/gal coating solids that was the result of a preliminary ranking presented in the preamble to the proposed rule (67 FR 52791, August 13, 2002). The commenter further argued that unless EPA sees a need to establish additional subcategories, this limit should apply to all sources in the general use coating category.

The commenter noted that the HAP limits for the general use category are higher than the actual emissions of ''a large portion'' of the existing sources that will be regulated by the final rule. From this observation, the commenter concluded that the final rule will allow several hundred sources to increase HAP emissions.

The commenter also contended that data from the miscellaneous metal parts and products industry indicated that coating formulations with less HAP do not result in less VOC, and it is incorrect to assume that VOC control is a proxy for HAP control. The commenter concluded from this observation that using State VOC rules to develop the MACT floor for HAP emissions was inconsistent with the CAA because no rational relationship existed between permitted VOC emissions and actual HAP emissions.

Response: For most of the sources in this source category, the State VOC rules constituted the only applicable and measurable emission limitation that could be used in a MACT floor ranking for some subcategories. We did not adopt the emission level indicated by the preliminary MACT ranking because that level was not achievable for the extremely diverse facilities in the relevant subcategories, as represented by the miscellaneous metal parts and products database. Along with various stakeholder groups, we also considered MACT rankings for individual industry segments, but the results for individual segments would not be achievable for all sources within those segments because of diversity even within those segments. The only exceptions were for the rubber-to-metal subcategory and the magnet-wire subcategory, where the MACT emission limits are based on the MACT database rankings for these segments. Therefore, we chose the final approach of basing HAP limits on State VOC limits for the general use and high performance categories. State VOC limits have been demonstrated to be achievable emission limitations for the range of sources included within these two miscellaneous metal parts and products subcategories.

We started our development of HAP limits with the State VOC limits and then applied the appropriate HAP/VOC ratio to determine a good representation of the HAP content of coatings that meet the VOC limits. If we had just used the VOC limits as HAP limits without adjusting for the HAP/VOC ratio, then the assertion in the comment would be more accurate.

Although we agree that some sources achieved nominally lower-HAP emission limitations than those derived from the State VOC limits, it is not clear that those lower-emitting facilities represent the range of sources in the source category or in any distinct or clearly definable subcategory or industry segment.

Contrary to the commenter's assertion, VOC limits do limit HAP emissions indirectly from this source category because nearly all organic HAP used in coatings and related solvents are also VOC. Although many VOC are not HAP, limiting VOC also limits HAP because the HAP content cannot exceed the VOC limit. Therefore, those sources subject to VOC limits have also reduced HAP emissions to comply with the VOC emission limits.

We have established for this source category that a reasonable relationship exists between State VOC rule limits and actual VOC emissions for most facilities. Using the miscellaneous metal parts and products survey data, we calculated the average VOC content (in lb VOC per gal of coating, less water) for each facility subject to a State VOC rule limit. The average VOC content of the coatings reported for each facility subject to a State VOC limit is nominally lower than the applicable State VOC limit, consistent with allowing a reasonable margin for compliance.

Comment: One commenter supported the HAP-to-VOC ratio that was used to convert the VOC limits in State coating rules to HAP limits. However, another commenter argued against using the average HAP-to-VOC ratio for all sources in setting the MACT floor, stating that among the best performing sources, the HAP-to-VOC ratio is much less than the 43-percent overall average ratio used by EPA. The commenter did not provide specific HAP-to-VOC ratios for any of the lower emitting facilities. The commenter argued that if EPA decides to base the rule on State VOC limits, EPA should replace the 43-percent HAP-to-VOC ratio with the average HAP-to-VOC ratio for the best performing 12 percent of sources.

Another commenter noted that the EPA database did not include or account for HAP contained in solvent blends. The commenter claimed that the default fractions for these products could ''significantly impact the baseline'' and requested that the VOC-to-HAP conversion factor be reviewed.

Response: As suggested by one commenter, we assessed the HAP-to-VOC ratio of those facilities that represented the MACT floor. And as suggested by other commenters, we reviewed the solvent blends that were used by a representative sample of sources and adjusted the emission limits is proposed to account for the organic HAP in solvent blends. The sources included in the MACT floor 12-percent determination are the facilities in the metal parts database that are subject to the most stringent State VOC coating rules.

Contrary to the one commenter's contention, we found that the HAP-to-VOC ratio for sources subject to the most stringent State VOC rules was neither lower than nor substantially different from the 0.43 ratio used to develop the proposed emission limits. We estimated that the organic HAP from solvent blends accounts for about 2 percent of all HAP. Therefore, the HAP-to-VOC ratio used for calculating the general use limits has been increased from 0.43 to 0.44 to account for the organic HAP in solvent blends, and the general use limits were recalculated and then rounded to two significant figures. The revised existing source limit is 2.6 lb organic HAP/gal (0.31 kg organic HAP/liter) coating solids used. The revised new source limit is 1.9 lb organic HAP/gal (0.23 kg organic HAP/liter). Some of the emission limits changed slightly due to rounding the proposed emission limits to two or three significant figures.

Since the high performance, magnet wire, and rubber-to-metal coating emission limits were not developed using the HAP-to-VOC ratio of 0.43, the emission limits for these coating operations were not recalculated. For the high performance limit, a ratio of 0.70 provided by industry was used. For magnet wire and rubber-to-metal, HAP content from the survey database were used to establish the floor, so no HAP-to-VOC ratio was needed for these subcategories.

Comment: Several commenters stated that the HAP from cleaning materials should not be included in the MACT floor or in calculating emission limits for general use coatings. The commenters argued that the State VOC rules on which these limits are based do not include cleaning solvents. Two commenters pointed out that State VOC rules follow the recommendations of EPA's control technique guideline document for miscellaneous metal parts and products surface coating, which recommends excluding cleaning solvents. By including the cleaning solvents in the miscellaneous metal parts and products MACT floor, the commenters claimed that EPA made the proposed limits more stringent than allowed by the MACT analysis based on State VOC rules. Two commenters suggested that if a cleaning solvent limit were necessary, it should be listed separately or averaged separately and then added directly to the proposed HAP limits.

Several commenters suggested changes to the rule as proposed if cleaning solvent emissions were to be regulated. Three commenters stated that cleaning solvents should be exempt from the final emission limits provided cleaning operations are conducted in closed containers. Two commenters suggested that the final rule should include work practices for cleaning solvents. One commenter noted that the Industrial Cleaning Solvent Alternative Control Technique document suggested solvent accounting and plant management practices to address emissions from solvent cleaning. The same commenter also noted that EPA has used its authority under section 112(h) of the CAA to incorporate work practices for cleaning solvents for the Wood Furniture, Aerospace, and Shipbuilding and Ship Repair NESHAP. One commenter suggested cleaning solvents be regulated separately from coatings based on HAP composition or vapor pressure.

Response: The EPA reviewed the cleaning material reported in the database for the miscellaneous metal parts rule and concluded that no-HAP cleaners are a viable option for sources subject to the final rule. The proposed and final emission limits reflect the fact that miscellaneous metal parts and products sources, for which EPA had data, were using cleaning solvents that contained no organic HAP or were using solvent blends containing only small percentages of organic HAP (*i.e.*, 6 percent HAP or less), which would have little, if any, effect on their emission rate. As described earlier, we have adjusted the HAP-to-VOC ratio used to establish the emission limits to account for the organic HAP contained in solvent blends.

The final rule accounts for cleaning operations that are conducted in closed containers, although there is no specific requirement to perform cleaning in closed containers. In the compliance calculations used in the emission rate without add-on controls option and the emission rate with add-on controls option, you only need to include the organic HAP contained in materials that are consumed during the previous 12-month period and you may take credit for organic HAP contained in materials that are sent off-site for recycling or disposal. If cleaning is performed in closed containers, the amount that evaporates to the atmosphere is minimized.

H. Compliance Options for Meeting the Emission Limits

Comment: Many commenters requested clarification on how the different compliance options could be applied to different coating lines at the same facility. Several commenters asked EPA to verify that a facility can choose different control options for different lines at a single facility.

Response: You may choose different compliance options for different lines at the same facility. For example, one line may be able to use the compliant materials option, while another line may need the flexibility to use higher- and lower-HAP materials under one of the emission rate compliance options. You may also use different compliance options within a single line, as long as different compliance options are not applied at the same time to the same coating applied to a single part. For example, most of the coatings used on a particular line may be able to individually meet the emission limit for a particular subcategory, but a few coatings may need a higher-HAP content. You could average these higher-HAP coatings with some of the lower-HAP materials under the emission rate without add-on controls option and demonstrate compliance for these separately, while the other lower-HAP coatings comply under the compliant materials option.

It may be more practical to use an add-on control for some coating operations, such as a specific line, than for others. If you have an add-on control device on some coating operations, the work practice standards apply to only the coatings and operations controlled by the add-on controls.

Comment: One commenter requested that EPA clarify how to switch between compliance options, specifically when switching between the compliant materials option and one of the two options that require calculating a 12-month rolling average emission rate. The commenter suggested that the final rule should allow maximum flexibility in switching between options as long as all compliance periods demonstrate compliance under at least one option, and the necessary data are available for calculating the needed 12-month averages.

Response: You may switch between compliance options at any time as long as you notify your permitting authority in your next semiannual compliance report, and you comply with all monitoring, recordkeeping, and reporting needed for the compliance option to which you are switching. Keep in mind, however, that if you switch from one compliance option to another, you must be able to demonstrate compliance based on the previous 12 months of data. As a result, you may need data from the previous 12 months of operation that were not specifically required by the option under which you were previously demonstrating compliance. This could be especially true if you switched from the compliant materials option to the emission rate without add-on controls option or the emission rate with add-on controls option.

If you began using an add-on control device and complying with the emission rate with add-on controls option, you may apply the emission reduction credit to only those coatings that were applied after you began using the add-on control device. You would also need to demonstrate compliance with the operating limits for the add-on control device only after you began using it. Conversely, if you stopped using an add-on control device and began complying with the emission rate without add-on controls option, you could no longer apply the emission reduction credit to coatings applied after the add-on control was shut down, but you would also no longer need to demonstrate compliance with the operating limits. In both cases, your 12-month compliance calculations would include a period when the control device was in use and a period when it was not. As you moved through time and performed subsequent monthly compliance calculations, the fraction of coating activity under the previous compliance option would decrease and the fraction under the current compliance option would increase.

Comment: One commenter requested that the HAP content of thinners and solvents not be restricted to absolute zero for the compliant materials option because thinners and solvents can pick up trace amounts of HAP during the recycling process.

Response: In the final rule, we have clarified that under the compliant materials compliance option, thinners and cleaning solvents do not need to be absolutely zero-HAP. We have included a definition of non-HAP materials based on common reporting thresholds that are already in use. Thinners and other additives, cleaning solvents, and coatings are considered non-HAP as long as the organic HAP level does not exceed the OSHA reporting thresholds for HAP (0.1 percent by weight for OSHA-defined carcinogens and 1.0 percent by weight for other HAP). In addition, we have included a provision that you do not need to redetermine the organic HAP content of solvents that are recycled off-site, if you have documentation showing that you received back the exact same solvent you originally sent off-site for recycling. This documentation ensures that the solvent you receive back does not represent a potential net increase in the organic HAP being brought to the site. The final rule contains a provision that you do not need to redetermine the organic HAP content of solvent recycled on site.

Comment: One commenter suggested that HAP emissions from storage, mixing, conveying, and waste management of coatings, thinners, cleaning materials, and associated wastes should be explicitly excluded in the emission calculations in the rule. The commenter noted that it is difficult to directly quantify these emissions and that there is often a lack of general agreement on how to quantify such losses. The commenter also noted that EPA stated in the preamble to the proposed rule that we were not able to obtain data to adequately quantify HAP emissions from storage, mixing, and waste handling (67 FR 52790).

Response: Under the compliant material option you must 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, additive, and cleaning material used contains no organic HAP. The compliant material option focuses on the organic HAP content of coatings, thinners, additives, and cleaning materials as received from the manufacturer or supplier and prior to any alteration. No separate or direct accounting of emissions from storage, mixing, and conveying of coatings, thinners, additives, cleaning materials and associated wastes is required under the compliant material option. Such an accounting clearly is not needed when each coating is a compliant coating and each thinner, additive, and cleaning material contains no organic HAP.

Under the emission rate without add-on controls option and the emission rate with add-on controls option all of the organic HAP content of coatings, thinners, additives, and cleaning materials is initially assumed to be emitted. (See calculation of the terms A, B, and C in § 63.3951(e).) Any emissions from storage, mixing, and conveying of coatings, thinners, additives, cleaning materials, and associated wastes are implicitly included in this assumption. The rule does include provisions which allow for reclaimed materials to be excluded from material usage. (See introductory language to § 63.3951.) The rule also includes provisions for the organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal to be excluded from the total mass of organic HAP emissions. No separate or direct accounting of emissions from storage, mixing, and conveying of coatings, thinners, additives, cleaning materials, and associated wastes is required under either the emission rate without add-on controls option or the emission rate with add-on controls option. Such an accounting clearly is not needed when all of the organic HAP content of coatings, thinners, additives, and cleaning materials is initially assumed to be emitted and provisions are made to exclude reclaimed materials from material usage and to exclude organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal to be excluded from the total mass of organic HAP emissions.

We agree that no separate or direct accounting of emissions from storage, mixing, and conveying of coatings, thinners, additives, cleaning materials, and associated wastes is required under this rule. We believe that this is sufficiently clear in the final rule. We have not made any changes in the final rule in regard to this comment.

I. Methods for Expressing Organic HAP Content of Coatings

Comment: Several commenters stated that the emission limits should be in units of pounds of HAP per gal of coating (lbs HAP/gal coating), rather than lbs HAP/gal solids to be consistent with existing permits and State coating rules. One commenter noted that changing the units from lb/gal coating to lb/gal solids would not allow the facility to continue to track performance improvements from VOC emission reduction initiatives. One commenter, a representative of the recreational vehicle industry, stated that using lb organic HAP/gal solids would be consistent with other coating rules that affect the recreational vehicle industry.

Response: The emission limits in many State VOC rules for miscellaneous metal parts coating are expressed in units of mass of VOC per volume of coating less water and less exempt compounds. Similar units were used for the emission limit recommendations in the 1978 guidance document for this source category titled Control of Volatile Organic Emissions from Existing Stationary Sources—Volume VI: Surface Coating of Miscellaneous Metal Parts and Products (EPA–450/2–78–015). These ‘‘less water’’ units are difficult to work with and are impractical for facilities with add-on control equipment. As a result of 1987 EPA guidance (52 FR 45108, November 24, 1987), some States have changed their VOC limits to mass of VOC per volume of solids, and most States have added alternative limits in units of mass of VOC per volume of solids for facilities with add-on control equipment.

The use of ‘‘less water’’ units for HAP in the final rule would lead to even more difficulties and probable confusion. In order to provide a meaningful basis for comparison of the HAP content of different coatings, the units would need to be mass of HAP per volume of coating less water and less non-HAP organic volatiles. Most coatings contain non-HAP organic volatiles. In order to express the HAP content of such coatings in these units, the weight fraction and density of each non-HAP organic volatile would be needed. This could be a significant additional data gathering burden. In addition, these units would be unworkable for facilities with add-on control equipment.

Comment: Additional commenters objected to expressing the emission limits in lb organic HAP/gal solids, claiming that this unit of measure is hard to understand and verify for several reasons: Estimating gal of solids is based on theoretical calculations; manufacturers do not routinely measure gal solids; and the two ASTM methods specified for measuring volume solids, ASTM Methods D2697–86 (Reapproved 1998) and D6093–97, are inaccurate and costly to run. The commenter also specifically claimed that the emission limits were based on an arbitrarily chosen default density for coating solids. The commenters recommended using lb organic HAP/lb coating solids because this metric is readily available from the manufacturers, is based on a reliable method, and is more universally used by the surface coating industry.

Response: Many Federal and State VOC rules use units of mass of VOC per volume of solids. In over 20 years of use, there have been no significant difficulties identified or reported in the use or understanding of these units. The volume solids content of coatings is routinely used by both coating manufacturers and coating users as a measure of coverage. The survey data that EPA collected on miscellaneous metal parts and products coatings indicate that volume solids data are commonly available.

The test methods for volume solids are one option for generating volume solids content data. Formulation data for volume solids may also be used. The final rule states that the test method results will take precedence unless, after consultation, you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

The emissions limits were, in part, determined by using a standard VOC density to convert State emission limits from units of mass of VOC per volume of coating less water and less exempt compounds to mass of VOC per volume of solids. The VOC density used for this conversion was 7.36 lbs per gal. This VOC density was used in EPA's 1978 guidance for this source category and is commonly used for converting emissions limits for this source category from a ''less water'' to a volume solids basis. This document is ''Control of Volatile Organic Emissions from Existing Stationary Sources—Volume VI: Surface Coating of Miscellaneous Metal Parts and Products,'' EPA–450/2–78–015. The density of coating solids is not needed and was not used to make this conversion.

Comment: One commenter requested that the final rule clarify how powder coatings can be used in calculations to show compliance with the emission rate option. The commenter noted that the compliance units and equations are based on volume, which is not applicable for non-liquid coatings, which are purchased by weight. The commenter suggested that the rule include a method for determining the density of powder coatings so the gal of solids for powder coatings can be determined.

Response: In the final rule, you may include the solids from powder coatings in the denominator for the emission rate calculations in the emission rate without add-on controls and the emission rate with add-on controls compliance options. By allowing facilities to include powder coatings in the compliance demonstrations, we hope to encourage greater use of this lower-emitting technology. The final rule includes ASTM Method D5965–02, ''Standard Test Method for Specific Gravity of Coating Powders,'' to measure the density of powder coatings. The density (or applied coating solids density) is density of the powder coating after application and curing. The bulk density (or apparent density) of the powder coating prior to application cannot be used in the compliance calculations because the bulk density will include air spaces in the powder that are not present in the cured coating.

Comments: One commenter stated that the final rule should allow sources or materials suppliers to use alternatives to EPA Method 24 to determine the amount of HAP that is actually emitted from reactive adhesives as they are used. The proposed rule and associated test methods assumed that all HAP contained in coatings or additives are emitted. However, in reactive adhesives, some of the HAP species react with other ingredients to form solids and are not emitted to the atmosphere. Therefore, the amount of HAP emitted can be significantly less than the amount of HAP present in the liquid adhesive.

Response: An alternative method for determining the fraction of HAP emitted from reactive adhesives has been included in appendix A to subpart PPPP 40 CFR part 63. Sources using reactive adhesives may use this method for demonstrating compliance based on the organic HAP actually emitted, rather than using Method 311, Method 24, or composition data. The method relies on preparing a sample (of known weight) of the adhesive as it will be applied, allowing it to fully cure, baking the sample, and then weighing the cured adhesive to determine the weight loss. The weight loss represents the volatile fraction that is emitted from the adhesive.

J. High Performance Coatings

Several commenters suggested that EPA expand the definition of high performance coating to include several types of specialized coatings: Paints for offshore oil platform structures, extreme performance oilfield coatings, and coatings exposed to food grade products in rail tank cars and in drums.

Two commenters requested that EPA expand the definition of high performance coating to include paints used for off shore oil platforms since general use coatings cannot withstand saltwater. The commenters noted that in Louisiana, the coatings used for large off shore structures are subject to the same State limits as those for the shipbuilding and ship repair industry and are not subject to the general use limits in the State miscellaneous metal parts and products rule. The commenters also noted that the definition of coating in the State rule and the Shipbuilding and Ship Repair NESHAP includes just paints and thinners, but the definition in the Miscellaneous Metal Parts and Products NESHAP includes adhesives, caulks, and cleaning solvents.

One commenter requested that extreme performance oilfield coatings should be included in the definition of high performance coating. According to the commenter, internal oilfield pipe coatings must withstand elevated temperature (as high as 400 degrees Fahrenheit), extreme pressure, corrosive materials, and abrasive service and these criteria are generally considered in defining the extreme performance category used in California VOC rules. According to the commenter, approximately 15 plants perform oilfield equipment coating.

Another commenter suggested that high performance coatings should include ''extreme performance coatings'' as defined by South Coast Air Quality Management District Rule 1107 with the addition of coatings exposed to food grade commodities. The commenter argued that this revision is needed for coatings used on rail tank car interiors and exteriors to protect them from harsh chemicals or food grade products such as wine and noted that coatings used in tank cars carrying food must meet FDA requirements. The commenter explained that tank car exteriors are exposed to spillage, fumes, salt air, snow, and temperature extremes.

One commenter added that EPA should expand the high performance coatings category to include the coatings applied to the interior of drums and pails to protect substrates from hazardous materials and safeguard food-grade products and prevent leakage. The commenter asked that EPA acknowledge that interior coatings for steel and other metal drums and pails are universally accepted as high performance coatings.

Response: We analyzed the metal parts survey data that represented the types of coating operations that the commenters argued should be included in the high performance coating category. In all cases, we found that the general use emission limit is achievable for these types of coating operations. The commenters submitted no coating HAP content data to support the need for including these coating types in the definition of high performance coatings.

The metal parts database includes data for facilities that coat off shore oil platforms and internal oilfield pipes. These data indicate that these facilities could comply with the general use emission limit. Therefore, based on the information available to the Administrator, the final rule does not include oil platform and internal oilfield pipe coatings in the definition of high performance coatings.

The metal parts database includes data from 21 sources performing coating operations on rail cars. These data indicate that the general use emission limit is achievable for these types of sources. Therefore, we did not write the final rule to include rail tank car interior or exterior coatings in the definition of high performance coatings.

The metal parts database includes data from 17 sources performing drum coating operations. These data indicate that the general use emission limit is achievable for these types of sources. Therefore, we did not write the final rule to include coatings applied to pails and drums in the definition of high performance coatings.

Comment: One commenter suggested that extreme performance fluoropolymer (EPFP) coatings should be exempt from the final rule or subject to the limit for high performance coatings. According to the commenter, these coatings are used when one or more of several performance criteria are required including creating a non-stick surface, providing solid film lubrication, providing chemical resistance, providing resistance to a wide range of temperatures, complying with certain FDA specifications, and others. The commenter claimed that water-borne EPFP coatings, for many applications, do not achieve satisfactory abrasion resistance, adhesion, thinness, and other performance criteria.

The commenter offered a definition of EPFP coatings, data on the HAP content of ten different EPFP coatings, and an estimate of national HAP emissions from EPFP coatings. According to the commenter, total estimated EPFP coating use is about 60,000 gal nationally with HAP emissions of about 45 tpy. The HAP content of the ten EPFP coatings submitted by the commenter ranged from 1.1 lb organic HAP/gal solids to 12.4 lb organic HAP/gal solids. The commenter did not provide any data on representative emission rates from EPFP coating operations. Data on HAP content for only a few of these coatings were included in the metal parts database, but these data were consistent with the data provided by the commenter.

Response: Based on the HAP content data and performance requirements fulfilled by EPFP coatings, we agree that EPFP coatings should not be subject to the general use emission limit. Therefore, the final rule includes a subcategory for EPFP coatings subject to an emission limit for new and existing sources of 1.5 kg organic HAP/liter coating solids (12.4 lb organic HAP/gal coating solids) used based on the data received with the public comments. This limit is more stringent than the high performance limit because the data provided by the commenter indicate that these coatings can meet a more stringent limit. Since sufficient data were available to establish a HAP content limit for these coatings, an exemption for these coatings is not needed in the final miscellaneous metal parts rule.

Comment: One commenter requested that the final rule exempt the coating of NASA launch support equipment or include the coating of this equipment in the surface coating NESHAP being developed for defense land systems and miscellaneous equipment. The commenter explained that these coatings have unique performance requirements, such as the ability to withstand the exhaust from rocket engines, and the coatings that meet these requirements must be qualified for use under NASA specifications.

Response: We agree that the coatings used on NASA launch support equipment have unique performance requirements. These performance requirements and the coatings needed to meet them will require further analysis before emission limits can be established. Since the process for qualifying coatings under NASA specifications is similar to the process of qualifying coatings for use under military specifications, these coating operations will be included in the development of the surface coating NESHAP being developed for defense land systems and miscellaneous equipment.

K. Compliance Requirements for Sources With Add-on Controls

Comment: Several commenters stated that the compliance calculations in § 63.3961(h) as proposed should not use an assumption of zero-efficiency when deviations occur. According to one commenter, any quantitative data on emissions should be allowed to be considered if agreed to by the enforcing agency. Other commenters stated that a source should be allowed to demonstrate through monitoring of other parameters, compliance with standard procedures, or other means (such as fuel consumption or manual temperature recordings) that some or all of the emissions were controlled. One commenter requested that EPA allow a facility to estimate capture or destruction efficiency during deviations, based on design data or test data. One commenter stated that facilities should be able to test over a range of operating conditions, so that the source can estimate control efficiency during the deviation rather than having to assume zero-percent efficiency in the compliance calculations.

Response: If a source has manually collected parameter data indicating that an emission capture system or control device was operating normally during a parameter monitoring system malfunction, these data could be used to support and document a different control efficiency, and the source would not have to assume zero-percent efficiency.

If a source has data indicating the actual performance of an add-on emission capture system and control device (*e.g.*, data from previous tests measuring percent capture at reduced flow rates or percent destruction efficiency at reduced thermal oxidizer temperatures) during a deviation from operating limits, then the source may use the actual performance in determining compliance, if the use of the data is approved by the Administrator. The final rule does not allow a source to otherwise estimate the efficiency of a capture system or control device during a deviation because this would provide no assurance of the quality of the data used in the compliance calculation.

L. Compliance Requirements for Magnet Wire Sources

Comment: Several commenters from the magnet wire industry argued that the testing and monitoring provisions for sources with add-on controls were not applicable to magnet wire coating machines. The commenters noted that magnet wire coating machines require an oven to cure the coating that is applied to the wire as it passes through the machine. The heat used to maintain the temperature of the oven is provided by the combustion of the solvents that are evaporated from the coating. Although a supplemental burner or heater is used to heat the oven at startup, once the oven is running, the temperature is maintained only by combustion of the solvent vapors. Combustion is maintained in modern ovens by a bed of catalyst that is located in the recirculating gas stream within the oven. In some older ovens, a burner tube is used in place of the catalyst bed to maintain temperature, although the solvent vapors are still the primary source of fuel for the oven. Air is recirculated from an evaporative zone in the oven, through the catalyst bed or burner tube, and back to the evaporative zone. A fraction of the air is vented to the atmosphere after combustion and replaced with air drawn in through the openings in the oven to maintain oxygen levels inside the oven.

According to the commenters, magnet wire ovens are different from other surface coating sources in several ways. First, the coating is applied by an automated machine that runs continuously until the product on that machine is changed. Second, the curing oven is essentially a narrow tube and is different from a spray booth or other type of enclosure used in other coating operations. Third, the catalyst bed or burner tube in the curing oven is integral to the curing oven and it must function properly to make a salable product. If the curing oven, catalyst bed, or burner tube malfunction, the machine cannot make a product, regardless of the air quality impacts of the malfunction. Therefore, proper operation of the machine is inherently consistent with good air pollution control practices.

The commenters argued that these differences make the testing and monitoring requirements for sources with add-on controls inappropriate for magnet wire coating machines. In particular, emissions at the inlet of the burner tube or catalyst bed cannot be measured in order to determine destruction efficiency across the burner tube or catalyst bed. Measuring destruction efficiency is also complicated by the fact that the oven recirculates emissions before a portion of the flow is vented to the atmosphere.

The commenters also noted that since magnet wire ovens are different from spray booths and other types of enclosures, the capture efficiency monitoring provisions are inappropriate. Since workers must access the wire inlets and outlets of the ovens while the machines are operating, it would be difficult to maintain the operating limits specified for enclosures used with add-on controls. Worker access would also prevent many ovens from meeting the criteria for permanent total enclosures.

Finally, the commenters noted that many magnet wire facilities have dozens, and occasionally hundreds, of magnet wire coating machines and that each machine has its own oven and burner tube or catalyst bed. Therefore, it would be overly burdensome to require emission testing of each magnet wire coating machine as part of an initial compliance demonstration and to require continuous parameter monitoring to demonstrate ongoing compliance. The commenters proposed changes included alternative emission testing and monitoring provisions.

Response: We agree with the commenters that magnet wire facilities are substantially different from other surface coating sources with conventional capture systems and add-on controls, and these differences were not reflected in the proposed rule. The final rule incorporates emission testing and parameter monitoring provisions that reflect the practical constraints of this industry.

The final rule includes alternative procedures for capture efficiency and destruction efficiency measurement where the control device is internal and integral to the oven so that it is difficult or infeasible to make gas measurements at the inlet to the control device. These alternative procedures for the magnet wire industry have been consolidated into appendix A to the final rule.

The alternative procedures determine the organic carbon content of the volatile matter entering the control device based on the quantity of coating used, the carbon content of the volatile portion of the coating, and the efficiency of the capture system. The organic carbon content of the control device outlet (oven exhaust for ovens without an external afterburner) is determined using Method 25 or 25A. You do not need to test every magnet wire coating machine. Instead, with approval you may test a single unit that represents identical or very similar magnet wire coating machines. We agree with the commenters that identical or very similar magnet wire coating machines achieve very similar capture and control device efficiencies, and it would be overly burdensome to test every machine at a facility. However, it is important to note that every untested magnet wire coating machine must comply with the operating limits that are established during the performance test of the representative unit.

If the capture system for a magnet wire coating machine meets the definition of a permanent total enclosure, then you may assume capture efficiency is 100 percent and no measure of capture efficiency is needed. Otherwise, capture efficiency can be measured using a liquid-to-uncaptured-gas protocol using a temporary total enclosure, or an alternative capture efficiency protocol meeting data quality objectives or lower confidence limits as described in appendix A to the National Emission Standards for the Printing and Publishing Industry (40 CFR part 63, subpart KK). These approaches are more appropriate when it is difficult or infeasible to make gas measurements at the inlet to the control device for measuring capture efficiency with a gas-to-gas protocol.

Capture efficiency of each magnet wire coating machine will be monitored by requiring each oven to be fitted with an interlock that will stop the coating process or with an alarm that will sound if a fan becomes inoperable or if the oven begins to overheat. Overheating is an indirect indicator that a fan in the oven is inoperable. Each oven must also be checked once every 6 months with a smoke stick to ensure that air is being pulled into the oven.

An alternative procedure for monitoring catalytic oxidizers on magnet wire coating machines is provided in appendix A of the final rule. This alternative allows you to develop and implement an inspection and maintenance plan as described in appendix A of the final rule and to measure the temperature either before or after the catalyst bed and compare the measured temperature to the operating limit. In addition to the inspection and maintenance plan, you must either perform periodic catalyst activity checks, or check the concentration of organic compounds in the oven exhaust.

Comment: Two commenters argued that annual sampling of catalyst activity in § 63.3967(b)(4)(i) as proposed is too frequent and would cause excessive downtime and unreasonable costs to remove and sample the catalyst for the magnet wire industry. The commenter noted that catalyst beds routinely perform at compliance levels for 2 or more years. The commenter believes that the final rule should require periodic sampling following the manufacturer's and catalyst supplier's recommended schedule and procedures and dictated by unit operation and maintenance records. In addition, the commenter stated that it is not necessary to conduct a performance test whenever the catalyst is replaced. Replacing the catalyst in itself ensures compliance, as long as the operating limits specified in Table 1 of the rule as proposed are achieved.

Response: We agree with the commenter that periodic sampling and analysis of the catalyst activity is sufficient for the magnet wire industry because the catalyst bed is integral to the proper functioning of the oven and the coating process. Therefore, for the magnet wire industry, periodic sampling and analysis consistent with the catalyst suppliers recommendations are sufficient. We also agree that replacement of the catalyst bed generally does not require a new performance test. Therefore, the final rule does not require a new test as long as the catalyst is similar to the old catalyst in kind and quality. Otherwise, a new test will be required.

Comment: Two commenters contended that the proposed requirements in § 63.3967(b)(4)(ii) and (iii) to perform monthly inspections of catalytic oxidizers are not practical or necessary for magnet wire coating machines because the burners and catalyst beds are inside the machine and integral to the proper functioning of the coating process. The commenters suggested a monthly external inspection and an annual internal inspection.

Response: We agree with the commenters that the proposed provisions were not practical or necessary for magnet wire sources. The final rule requires a monthly external inspection and an annual internal inspection. The annual internal inspection is not required for internal catalysts which cannot be accessed without disassembling the oven.

V. Summary of Environmental, Energy, and Economic Impacts

Model plants were developed to aid in estimating the impacts the final rule 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 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, non-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 non-HAP cleaning materials.

For the purpose of assessing potential cost and emission reduction impacts, we assumed that all existing sources would convert to liquid coatings and thinners with lower-HAP content than presently used and non-HAP cleaning materials. We assumed that new sources would use either powder coatings or lower-HAP coatings and non-HAP cleaning materials.

We first estimated the impacts of the 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 will become affected sources each year.

A. What Are the Air Impacts?

For existing major sources, we estimated that compliance with the 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 1997 baseline organic HAP emissions of 53,869 tpy.

To estimate the impacts of the final rule 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 final rule. For new sources, we believe that many will use coating technologies that are considered to be ''state-of-the-art'' (*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 organic HAP reductions resulting from new facilities complying with the final rule would be about 803 tpy from the 45 new sources that would become subject to the rule each year.

We predict that the emission limitations will not result in any significant secondary air impacts. We expect that the majority of facilities will switch to lower-or non-organic-HAP-containing materials to comply with the standards, rather than installing add-on control devices. Thus, increases in electricity consumption (which could lead to increases in emissions of nitrogen oxides, sulfur dioxide, carbon monoxide, and carbon dioxide from electric utilities) will be minimal.

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 lower-HAP or non-HAP coating 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 lower-HAP containing or non-HAP 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 final rule have also been included.

Existing Sources. We estimate total nationwide annual costs in the 5th year to comply with the 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.

To comply with the final rule, existing facilities will likely use lower-HAP or non-HAP coatings, thinners, and cleaning materials because such materials are generally available and becoming more widely available each year. 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 final rule by switching to non-HAP adhesives, surface preparation materials and cleaning materials and reducing the organic 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.

New Sources. We estimated total nationwide annual costs in the 5th year to comply with the emission limits to be $9.8 million for new sources. These costs include approximately $3.6 million for direct costs associated with material usage and $6.2 million for the costs of recordkeeping and reporting. These costs were estimated applying the same assumptions for estimating costs for existing sources. We estimated the number of new major sources to be 45 per year, based on an average growth rate of 3 percent per year.

C. What Are the Economic Impacts?

We prepared an economic impact analysis (EIA) to provide an estimate of the impacts the proposed rule would have on facilities, firms, and markets within this source category. Given the wide diversity of products that will be affected by the final rule, 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 final rule 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 final rule 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 final rule. For more information, consult Docket ID No. OAR–2003–0116 (formerly Docket No. A–97–34).

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 lower-HAP or non-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. Because new sources are expected to comply with the final rule through the use of lower-HAP or non-HAP coating technologies rather than add-on control devices, there would be no significant change in energy usage.

We estimate that the emission limitations will have a minimal impact on water quality because only a few facilities are expected to comply by making process modifications or by using add-on control devices that would generate wastewater. However, because many lower-HAP and non-HAP materials are waterborne, an increase in wastewater generation from cleaning activities may result. Although additional wastewater may be generated by facilities switching to waterborne coatings, the amount of wastewater generated by these facilities is not expected to increase significantly. We also estimate that the emission limitations will result in a decrease in the amount of both solid and hazardous waste from facilities, as the majority of facilities will be using lower-organic-HAP-containing materials which will result in a decrease in the amount of waste materials that will have to be disposed of as hazardous.

VI. Statutory and Executive Order Reviews

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 the Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Executive Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

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

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

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

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

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

B. Paperwork Reduction Act

The information collection requirements in the final rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501, *et seq.* The information collection requirements are not enforceable 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 EPA policies set forth in 40 CFR part 2, subpart B.

The final rule requires 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. When this information collection request is approved by OMB, the Agency will publish a technical amendment to 40 CFR part 9 in the **Federal Register** to display the OMB control number for the approved information collection requirements contained in the final rule.

C. Regulatory Flexibility Act

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with the final rule. The EPA has also determined that the final rule will not have a significant economic impact on a substantial number of small entities. For purposes of assessing the impact of the final rule on small entities, small entity is defined as: (1) A small business according to Small Business Administration (SBA) size standards by NAICS code ranging from 100 to 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; or (3) a small organization that is any not-for-profit enterprise that is independently operated and is not dominant in its field. It should be noted that companies affected by the final rule and the small business definition applied to each industry by NAICS code is that listed in the SBA size standards (13 CFR part 121).

After considering the economic impacts of the final rule on small entities, EPA has concluded that this action will not have a significant economic impact on a substantial number of small entities. For purposes of assessing the impacts of the final rule on small entities, EPA conducted an assessment of the final rule 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 final rule, 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.

Although the final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has worked aggressively to minimize the impact of the final rule on small entities. We solicited input from small entities during the data-gathering phase of the rulemaking. We are promulgating compliance options that 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 lower-or non-HAP coatings, thinners, and cleaning materials (*i.e.*, pollution prevention) that meet the final rule rather than being required to purchase add-on control systems. The lower- or non-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 providing 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 promulgating the minimum monitoring, recordkeeping, and reporting requirements needed for enforcement and compliance assurance.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under Section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that the final 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 final rule for any 1 year has been estimated to be about $57.5 million. Thus, the final rule is not subject to the requirements of sections 202 and 205 of the UMRA. In addition, EPA has determined that the final 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, the final rule is not subject to the requirements of Section 203 of the UMRA.

E. Executive Order 13132: Federalism

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

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

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175 (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure ‘‘meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.’’ The final rule does not have tribal implications, as specified in Executive Order 13175. The EPA is not aware of tribal governments that own or operate miscellaneous metal parts and products surface coating facilities. Thus, Executive Order 13175 does not apply to the final rule.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ‘‘economically significant’’ as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, 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 final rule is not subject to Executive Order 13045 because it does not establish environmental standards based on an assessment of health or safety risks.

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

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

I. National Technology Transfer and Advancement Act

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

The final rule involves technical standards. The EPA cites the following standards in the final rule: EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 3, 3A, 3B, 4, 24, 25, 25A, 204, 204A–F, 311, and an alternative method to determine weight volatile matter content and weight solids content for reactive adhesives. Consistent with the NTTAA, EPA conducted searches to identify VCS in addition to these EPA methods/performance specifications. No applicable VCS were identified for EPA Methods 1A, 2A, 2D, 2F, 2G, 204, 204A through 204F, 311, and an alternative method to determine weight volatile matter content and weight solids content for reactive adhesives. The search and review results have been documented and are placed in Docket ID No. OAR–2003–0116 (formerly Docket No. A–97–34).

Six VCS: ASTM D1475–90, ASTM D2369–95, ASTM D3792–91, ASTM D4017–96a, ASTM D4457–85 (Reapproved 1991), and ASTM D5403–93 are already incorporated by reference (IBR) in EPA Method 24. In addition, we are separately specifying the use of ASTM D1475–98, ‘‘Standard Test Method for Density of Liquid Coatings, Inks, and Related Products,’’ for measuring the density of each coating, thinner and/or additive, and cleaning material. Five VCS: ASTM D1979–91, ASTM D3432–89, ASTM D4747–87, ASTM D4827–93, and ASTM PS9–94 are IBR in EPA Method 311.

Two VCS were identified for determining the volume fraction of coating solids for the final rule. The VCS are ASTM D2697–86 (Reapproved 1998), ‘‘Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings,’’ and ASTM D6093–97 (Reapproved 2003), ‘‘Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer.’’ These VCS fill a void in EPA Method 24 which directs that volume solids content be calculated from the coating manufacturer’s formulation. The final 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, unless after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct. In addition, ASTM D5965–02, ‘‘Standard Test Methods for Specific Gravity of Coating Powders,’’ is specified in the final rule as a method to determine the volume solids of powder coatings.

The VCS, ASTM D5291–02, ‘‘Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants,'' is specified in this rule to determine the weight fraction carbon content of each volatile distillate fraction obtained with Method 204F.

The VCS, ASTM D6053–00, ''Standard Test Method for Determination of Volatile Organic Compound (VOC) Content of Electrical Insulating Varnishes,'' is also specified in this rule as an alternative method to EPA Method 24 to determine the mass fraction of total volatile hydrocarbon for magnet wire enamels.

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

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

Under 40 CFR 63.7(f) and 63.8(f) of subpart A of the General Provisions, a source may apply to EPA for permission to use alternative test methods or alternative monitoring requirements in place of any of the EPA testing methods, performance specifications, or procedures.

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801, *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing the final rule and other required information to the United States Senate, the United States House of Representatives, and the Comptroller General of the United States prior to publication of the final rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a major rule as defined by 5 U.S.C. 804(2). The rule will be effective January 2, 2004.

List of Subjects in 40 CFR Part 63

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

Dated: August 20, 2003.

Marianne Lamont Horinko,

Acting Administrator.

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

PART 63—[AMENDED]

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

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

Subpart A—[Amended]

■ 2. Section 63.14 is amended by revising paragraphs (b)(24) (25), and (26), and adding new paragraphs (b)(31), (32), and (33) to read as follows:

§ 63.14 Incorporations by reference

* * * * *

(b) * * *

(24) ASTM D2697–86 (Reapproved 1998), Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings, IBR approved for §§ 63.3521(b)(1), 63.3941(b)(1), 63.4141(b)(1), 63.4741(b)(1), 63.4941(b)(1), and 63.5160(c).

(25) ASTM D6093–97 (Reapproved 2003), Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer, IBR approved for §§ 63.3521(b)(1), 63.3941(b)(1), 63.4141(b)(1), 63.4741(b)(1), 63.4941(b)(1), and 63.5160(c).

(26) ASTM D1475–98, Standard Test Method for Density of Liquid Coatings, Inks, and Related Products, IBR approved for §§ 63.3941(b)(4), 63.3941(c), 63.3951(c), 63.4141(b)(3), and 63.4141(c).

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(31) ASTM D5291–02, Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants, IBR approved for § 63.3981, appendix A.

(32) ASTM D5965–02, Standard Test Methods for Specific Gravity of Coating Powders, IBR approved for § 63.3951(c).

(33) ASTM D6053–00, Standard Test Method for Determination of Volatile Organic Compound (VOC) Content of Electrical Insulating Varnishes, IBR approved for § 63.3981, appendix A.

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

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

Sec.

What This Subpart Covers

63.3880 What is the purpose of this subpart?
63.3881 Am I subject to this subpart?
63.3882 What parts of my plant does this subpart cover?
63.3883 When do I have to comply with this subpart?

Emission Limitations

63.3890 What emission limits must I meet?
63.3891 What are my options for meeting the emission limits?
63.3892 What operating limits must I meet?
63.3893 What work practice standards must I meet?

General Compliance Requirements

63.3900 What are my general requirements for complying with this subpart?
63.3901 What parts of the General Provisions apply to me?

Notifications, Reports, and Records

63.3910 What notifications must I submit?
63.3920 What reports must I submit?
63.3930 What records must I keep?
63.3931 In what form and for how long must I keep my records?

Compliance Requirements for the Compliant Material Option

63.3940 By what date must I conduct the initial compliance demonstration?
63.3941 How do I demonstrate initial compliance with the emission limitations?
63.3942 How do I demonstrate continuous compliance with the emission limitations?

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

63.3950 By what date must I conduct the initial compliance demonstration?
63.3951 How do I demonstrate initial compliance with the emission limitations?
63.3952 How do I demonstrate continuous compliance with the emission limitations?

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?
63.3961 How do I demonstrate initial compliance?
63.3962 [Reserved]

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

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) Miscellaneous metal parts and products include, but are not limited to, metal components of the following types of products as well as the products themselves: motor vehicle 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, metal pipes, and numerous other industrial, household, and consumer products. Except as provided in paragraph (c) of this section, the source category to which this subpart applies is the surface coating of any miscellaneous metal parts or products, as described in paragraph (a)(1) of this section, and it includes the subcategories listed in paragraphs (a)(2) through (6) of this section.

(1) Surface coating is the application of coating to a substrate using, for example, spray guns or dip tanks. When application of coating to a substrate occurs, then surface coating also includes associated activities, such as surface preparation, cleaning, mixing, and storage. However, these activities do not comprise surface coating if they are not directly related to the application of the coating. Coating application with handheld, non-refillable aerosol containers, touch-up markers, marking pens, or the application of paper film or plastic film which may be pre-coated with an adhesive by the manufacturer are not coating operations for the purposes of this subpart.

(2) The general use coating subcategory includes all surface coating operations that are not high performance, magnet wire, rubber-to-metal, or extreme performance fluoropolymer coating operations.

(3) The high performance coating subcategory includes surface coating operations that are performed using coatings that meet the definition of high performance architectural coating or high temperature coating in § 63.3981.

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

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

(6) The extreme performance fluoropolymer coatings subcategory includes surface coating operations that are performed using coatings that meet the definition of extreme performance fluoropolymer 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 (gal)) per year, or more, of coatings that contain hazardous air pollutants (HAP) in the surface coating of miscellaneous metal parts and products 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 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. You do not need to include coatings that meet the definition of non-HAP coating contained in § 63.3981 in determining whether you use 946 liters (250 gal) per year, or more, of coatings in the surface coating of miscellaneous metal parts and products.

(c) This subpart does not apply to surface coating or a coating operation that meets any of the criteria of paragraphs (c)(1) through (17) of this section.

(1) A coating operation conducted at a facility where the facility uses only coatings, thinners and other additives, and cleaning materials that contain no organic HAP, as determined according to § 63.3941(a).

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

(3) Coatings used in volumes of less than 189 liters (50 gal) per year, provided that the total volume of coatings exempt under this paragraph does not exceed 946 liters (250 gal) per year at the facility.

(4) The surface coating of metal parts and products performed on-site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State) or the National Aeronautics and Space Administration, or the surface coating of military munitions manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State).

(5) Surface coating where plastic is extruded onto metal wire or cable or metal parts or products to form a coating.

(6) Surface coating of metal components of wood furniture that meet the applicability criteria for wood furniture manufacturing (subpart JJ of this part).

(7) Surface coating of metal components of large appliances that meet the applicability criteria for large appliance surface coating (subpart NNNN of this part).

(8) Surface coating of metal components of metal furniture that meet

the applicability criteria for metal furniture surface coating (subpart RRRR of this part).

(9) Surface coating of metal components of wood building products that meet the applicability criteria for wood building products surface coating (subpart QQQQ of this part).

(10) Surface coating of metal components of aerospace vehicles that meet the applicability criteria for aerospace manufacturing and rework (40 CFR part 63, subpart GG).

(11) Surface coating of metal parts intended for use in an aerospace vehicle or component using specialty coatings as defined in appendix A to subpart GG of this part.

(12) Surface coating of metal components of ships that meet the applicability criteria for shipbuilding and ship repair (subpart II of this part).

(13) Surface coating of metal using a web coating process that meets the applicability criteria for paper and other web coating (subpart JJJJ of this part).

(14) Surface coating of metal using a coil coating process that meets the applicability criteria for metal coil coating (subpart SSSS of this part).

(15) Surface coating of boats or metal parts of boats (including, but not limited to, the use of assembly adhesives) where the facility meets the applicability criteria for boat manufacturing facilities (subpart VVVV of this part), except where the surface coating of the boat is a metal coating operation performed on personal watercraft or parts of personal watercraft. This subpart does apply to metal coating operations performed on personal watercraft and parts of personal watercraft.

(16) Surface coating of assembled on-road vehicles that meet the applicability criteria for the assembled on-road vehicle subcategory in plastic parts and products surface coating (40 CFR part 63, subpart PPPP).

(17) Reserved.

(d) Reserved.

(e) If you own or operate an affected source that meets the applicability criteria of this subpart and at the same facility you also perform surface coating that meets the applicability criteria of any other final surface coating NESHAP in this part you may choose to comply as specified in paragraph (e)(1), (2), or (3) of this section.

(1) You may have each surface coating operation that meets the applicability criteria of a separate NESHAP comply with that NESHAP separately.

(2) You may comply with the emission limitation representing the predominant surface coating activity at your facility, as determined according to paragraphs (e)(2)(i) through (ii) of this section. However, you may not establish high performance, rubber-to-metal, and extreme performance fluoropolymer coating operations as the predominant activity.

(i) If a surface coating operation accounts for 90 percent or more of the surface coating activity at your facility (that is, the predominant activity), then compliance with the emission limitations of the predominant activity for all surface coating operations constitutes compliance with these and other applicable surface coating NESHAP. In determining predominant activity, you must include coating activities that meet the applicability criteria of other surface coating NESHAP and constitute more than 1 percent of total coating activities at your facility. Coating activities that meet the applicability criteria of other surface coating NESHAP but comprise less than 1 percent of coating activities need not be included in the determination of predominant activity but must be included in the compliance calculation.

(ii) You must use liters (gal) of solids used as a measure of relative surface coating activity over a representative period of operation. You may estimate the relative volume of coating solids used from parameters other than coating consumption and volume solids content (*e.g.*, design specifications for the parts or products coated and the number of items produced). The determination of predominant activity must accurately reflect current and projected coating operations and must be verifiable through appropriate documentation. The use of parameters other than coating consumption and volume solids content must be approved by the Administrator. You may use data for any reasonable time period of at least 1 year in determining the relative amount of coating activity, as long as they represent the way the source will continue to operate in the future and are approved by the Administrator. You must determine the predominant activity at your facility and submit the results of that determination with the initial notification required by § 63.3910(b). You must also determine predominant activity annually and include the determination in the next semi-annual compliance report required by § 63.3920(a).

(3) You may comply with a facility-specific emission limit calculated from the relative amount of coating activity that is subject to each emission limit. If you elect to comply using the facility-specific emission limit alternative, then compliance with the facility-specific emission limit and the emission limitations in this subpart for all surface coating operations constitutes compliance with this and other applicable surface coating NESHAP. The procedures for calculating the facility-specific emission limit are specified in § 63.3890. In calculating a facility-specific emission limit, you must include coating activities that meet the applicability criteria of other surface coating NESHAP and constitute more than 1 percent of total coating activities at your facility. Coating activities that meet the applicability criteria of other surface coating NESHAP but comprise less than 1 percent of total coating activities need not be included in the calculation of the facility-specific emission limit. Compliance with the facility-specific emission limit and all other applicable provisions of this subpart for all surface coating operations constitutes compliance with this and all other applicable surface coating NESHAP.

§ 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 four 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/or other additives, and cleaning materials are stored or mixed;

(3) All manual and automated equipment and containers used for conveying coatings, thinners and/or other additives, 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 it meets 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 January 2, 2004, the compliance date is January 2, 2004.

(2) If the initial startup of your new or reconstructed affected source occurs after January 2, 2004, 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 January 2, 2004.

(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 January 2, 2004, 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 January 2, 2004, whichever is later.

(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 (5) of this section, except as specified in paragraph (c) of this section, determined according to the requirements in § 63.3941, § 63.3951, or § 63.3961.

(1) For each new general use coating affected source, limit organic HAP emissions to no more than 0.23 kilograms (kg) (1.9 pound (lb)) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(2) For each new high performance coating affected source, limit organic HAP emissions to no more than 3.3 kg (27.5 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(3) For each new magnet wire coating affected source, limit organic HAP emissions to no more than 0.050 kg (0.44 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(4) For each new rubber-to-metal coating affected source, limit organic HAP emissions to no more than 0.81 kg (6.8 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(5) For each new extreme performance fluoropolymer coating affected source, limit organic HAP emissions to no more than 1.5 kg (12.4 lb) organic HAP per liter (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 (5) of this section, except as specified in paragraph (c) of this section, determined according to the requirements in § 63.3941, § 63.3951, or § 63.3961.

(1) For each existing general use coating affected source, limit organic HAP emissions to no more than 0.31 kg (2.6 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(2) For each existing high performance coating affected source, limit organic HAP emissions to no more than 3.3 kg (27.5 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(3) For each existing magnet wire coating affected source, limit organic HAP emissions to no more than 0.12 kg (1.0 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(4) For each existing rubber-to-metal coating affected source, limit organic HAP emissions to no more than 4.5 kg (37.7 lb) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(5) For each existing extreme performance fluoropolymer coating affected source, limit organic HAP emissions to no more than 1.5 kg (12.4 lbs) organic HAP per liter (gal) coating solids used during each 12-month compliance period.

(c) If your facility's surface coating operations meet the applicability criteria of more than one of the subcategory emission limits specified in paragraphs (a) or (b) of this section, you may comply separately with each subcategory emission limit or comply using one of the alternatives in paragraph (c)(1) or (2) of this section.

(1) If the general use or magnet wire surface coating operations subject to only one of the emission limits specified in paragraphs (a)(1), (3), (b)(1), or (3) of this section account for 90 percent or more of the surface coating activity at your facility (*i.e.*, it is the predominant activity at your facility), then compliance with that one emission limitations in this subpart for all surface coating operations constitutes compliance with the other applicable emission limits. You must use liters (gal) of solids used as a measure of relative surface coating activity over a representative period of operation. You may estimate the relative volume of coating solids used from parameters other than coating consumption and volume solids content (*e.g.*, design specifications for the parts or products coated and the number of items produced). The determination of predominant activity must accurately reflect current and projected coating operations and must be verifiable through appropriate documentation. The use of parameters other than coating consumption and volume solids content must be approved by the Administrator. You may use data for any reasonable time period of at least 1 year in determining the relative amount of coating activity, as long as they represent the way the source will continue to operate in the future and are approved by the Administrator. You must determine the predominant activity at your facility and submit the results of that determination with the initial notification required by § 63.3910(b). Additionally, you must determine the facility's predominant activity annually and include the determination in the next semi-annual compliance report required by § 63.3920(a).

(2) You may calculate and comply with a facility-specific emission limit as described in paragraphs (c)(2)(i) through (iii) of this section. If you elect to comply using the facility-specific emission limit alternative, then compliance with the facility-specific emission limit and the emission limitations in this subpart for all surface coating operations constitutes compliance with this and other

applicable surface coating NESHAP. In calculating a facility-specific emission limit, you must include coating activities that meet the applicability criteria of the other subcategories and constitute more than 1 percent of total coating activities. Coating activities that meet the applicability criteria of other surface coating NESHAP but comprise less than 1 percent of coating activities need not be included in the determination of predominant activity but must be included in the compliance calculation.

(i) You are required to calculate the facility-specific emission limit for your facility when you submit the notification of compliance status required in § 63.3910(c), and on a monthly basis afterward using the coating data for the relevant 12-month compliance period.

(ii) Use Equation 1 of this section to calculate the facility-specific emission limit for your surface coating operations for each 12-month compliance period.

$$\text{Facility-Specific Emission Limit} = \frac{\sum_{i=1}^{n}(\text{Limit}_i)(\text{Solids}_i)}{\sum_{i=1}^{n}(\text{Solids}_i)} \qquad \text{(Eq. 1)}$$

Where:

Facility-specific emission limit = Facility-specific emission limit for each 12-month compliance period, kg (lb) organic HAP per kg (lb) coating solids used.

Limit_i = The new source or existing source emission limit applicable to coating operation, i, included in the facility-specific emission limit, converted to kg (lb) organic HAP per kg (lb) coating solids used, if the emission limit is not already in those units. All emission limits included in the facility-specific emission limit must be in the same units.

Solids_i = The liters (gal) of solids used in coating operation, i, in the 12-month compliance period that is subject to emission limit, i. You may estimate the volume of coating solids used from parameters other than coating consumption and volume solids content (*e.g.*, design specifications for the parts or products coated and the number of items produced). The use of parameters other than coating consumption and volume solids content must be approved by the Administrator.

n = The number of different coating operations included in the facility-specific emission limit.

(iii) If you need to convert an emission limit in another surface coating NESHAP from kg (lb) organic HAP per kg (lb) coating solids used to kg (lb) organic HAP per liter (gal) coating solids used, you must use the default solids density of 1.26 kg solids per liter coating solids (10.5 lb solids per gal solids).

§ 63.3891 What are my options for meeting the emission limits?

You must include all coatings (as defined in § 63.3981), thinners and/or other additives, 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. You may employ different compliance options when different coatings are applied to the same part, or when the same coating is applied to different parts. 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/or other additive, and 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/or other additives, 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/or other additives, 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 use this compliance option, you must also demonstrate that all emission capture systems and add-on control devices for the coating operation(s) meet the operating limits required in § 63.3892, 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/or other additives, 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 and/or other additives, cleaning materials, and waste materials must be stored in closed containers.

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

(3) Organic-HAP-containing coatings, thinners and/or other additives, 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, 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 develop and implement a written startup, shutdown, and malfunction plan according to the provisions in § 63.6(e)(3). The plan must address the 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 January 2, 2004, whichever is later. For an existing affected source, you must submit the initial notification no later than 1 year after January 2, 2004. If you are using compliance with the Automobiles and Light-Duty Trucks NESHAP (subpart IIII of this part) under § 63.3881(d) to constitute compliance with this subpart for your metal part coating operations, then you must include a statement to this effect in your initial notification and no other notifications are required under this subpart. If you are complying with another NESHAP that constitutes the predominant activity at your facility under § 63.3881(e)(2) to constitute compliance with this subpart for your metal coating operations, then you must include a statement to this effect in your initial notification and no other notifications are required under this subpart.

(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 (11) 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 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 (lb) of organic HAP emitted per liter (gal) 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 may 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/or other additive, and for one cleaning material.

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

(iii) Density for one coating, one thinner and/or other additive, and one leaning 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) of 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 2 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/or other additives, 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 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 are complying with a single emission limit representing the predominant activity under § 63.3890(c)(1), include the calculations and supporting information used to demonstrate that this emission limit represents the predominant activity as specified in § 63.3890(c)(1).

(11) If you are complying with a facility-specific emission limit under § 63.3890(c)(2), include the calculation of the facility-specific emission limit and any supporting information as specified in § 63.3890(c)(2).

§ 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 or agreed to 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 date is the first date 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 will 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 (vii) 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 for each option you used.

(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.

(vi) If you used the predominant activity alternative (§ 63.3890(c)(1)), include the annual determination of predominant activity if it was not included in the previous semi-annual compliance report.

(vii) If you used the facility-specific emission limit alternative (§ 63.3890(c)(2)), include the calculation of the facility-specific emission limit for each 12-month compliance period 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 organic HAP content requirements 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 applicable emission limit, and each thinner and/or other additive, 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 2 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 (*e.g.*, information provided by coating suppliers or manufacturers, or test reports).

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

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

(6) *Deviations: Emission rate without add-on controls option.* If you used the emission rate without add-on controls option and there was a deviation from the applicable emission limit in § 63.3890, 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 of § 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 (*e.g.*, information provided by materials suppliers or manufacturers, or test reports).

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

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

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

(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/or other additives, 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 (*e.g.*, information provided by materials suppliers or manufacturers, or test reports).

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

(iv) A brief description of the CPMS.

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

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

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

(viii) The date and time period of each deviation from an operating limit in Table 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 of this subpart and bypasses of the add-on control device during the semiannual reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

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

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

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

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

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

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

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

(2) If your actions were not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report as described in 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. If you are using the predominant activity alternative under § 63.3890(c), you must keep records of the data and calculations used to determine the predominant activity. If you are using the facility-specific emission limit alternative under § 63.3890(c), you must keep records of the data used to calculate the facility-specific emission limit for the initial compliance demonstration. You must also keep records of any data used in each annual predominant activity determination and in the calculation of the facility-specific emission limit for each 12-month compliance period included in the semi-annual compliance reports.

(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/or other additive, 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 on which you used each compliance option and the time periods (beginning and ending dates and times) for each option you used.

(2) For the compliant material option, a record of the calculation of the organic HAP content for each coating, using Equation 2 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/or other additives, 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/or other additives, 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, as applicable;

(iv) The calculation of each month's organic HAP emission rate using Equation 4 of § 63.3961; and

(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/or other additive, and cleaning material used during each compliance period. If you are using the compliant material option for all coatings at the source, you may maintain purchase records for each material used rather than a record of the volume used.

(e) A record of the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each compliance period unless the material is tracked by weight.

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

(g) 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 coating, thinner and/or other additive, 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 204F 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 204E 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 204C 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 204E 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 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through 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 limit in § 63.3890, and that you used no thinners and/or other additives, or cleaning materials that contained organic HAP as determined according to § 63.3941(a).

§ 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 and/or other additive, 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. You must conduct a separate initial compliance demonstration for each general use, high performance, magnet wire, rubber-to-metal, and extreme performance fluoropolymer coating operation unless you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in § 63.3890(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in § 63.3890(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. Use the procedures in this section on each coating, thinner and/or other additive, 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 organic HAP content of coatings, thinners and/or other additives, and cleaning materials that are reclaimed on-site (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coating operation for which you use the compliant material option, provided these materials in their condition as received were demonstrated to comply with the compliant material option.

(a) *Determine the mass fraction of organic HAP for each material used.* You must determine the mass fraction of organic HAP for each coating, thinner and/or other additive, 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 (*e.g.*, 0.3791).

(ii) Calculate the total mass fraction of organic HAP in the test material by adding up the individual organic HAP mass fractions and truncating the result to three places after the decimal point (*e.g.*, 0.763).

(2) *Method 24 (appendix A to 40 CFR part 60).* For coatings, you may use Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, you may use the alternative method contained in appendix A to subpart PPPP of this part, rather than Method 24. You may use the volatile fraction that is emitted, as measured by the alternative method in appendix A to subpart PPPP of this part, as a substitute for the 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. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, you may rely on manufacturer's data that expressly states the organic HAP or volatile matter mass fraction emitted. 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 unless, after consultation, you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(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 according to the instructions for Table 3, and you may use Table 4 only if the solvent blends in the materials you use do not match any of the solvent blends in Table 3 and you know only whether the blend is aliphatic or aromatic. However, if the

results of a Method 311 (appendix A to 40 CFR part 63) test indicate higher values than those listed on Table 3 or 4 to this subpart, the Method 311 results will take precedence unless, after consultation, you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(b) *Determine the volume fraction of coating solids for each coating.* You must determine the volume fraction of coating solids (liters (gal) of coating solids per liter (gal) of coating) for each coating used during the compliance period by a test, by information provided by the supplier or the manufacturer of the material, or by calculation, as specified in paragraphs (b)(1) through (4) 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)(3) or (4) of this section, the test results will take precedence unless, after consultation, you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(1) *ASTM Method D2697–86 (Reapproved 1998) or ASTM Method D6093–97 (Reapproved 2003).* You may use ASTM Method D2697–86 (Reapproved 1998), ''Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings'' (incorporated by reference, see § 63.14), or ASTM Method D6093–97 (Reapproved 2003), ''Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer'' (incorporated by reference, see § 63.14), 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) *Alternative method.* You may use an alternative test method for determining the solids content of each coating once the Administrator has approved it. You must follow the procedure in § 63.7(f) to submit an alternative test method for approval.

(3) *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.

(4) *Calculation of volume fraction of coating solids.* You may determine the volume fraction of coating solids using Equation 1 of this section:

$$V_s = 1 - \frac{m_{volatiles}}{D_{avg}} \qquad \text{(Eq. 1)}$$

Where:

V_s = Volume fraction of coating solids, liters (gal) coating solids per liter (gal) coating.

$m_{volatiles}$ = Total volatile matter content of the coating, including HAP, volatile organic compounds (VOC), water, and exempt compounds, determined according to Method 24 in appendix A of 40 CFR part 60, grams volatile matter per liter coating.

D_{avg} = Average density of volatile matter in the coating, grams volatile matter per liter volatile matter, determined from test results using ASTM Method D1475–98, ''Standard Test Method for Density of Liquid Coatings, Inks, and Related Products'' (incorporated by reference, see § 63.14), 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 information sources, the test results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(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, ''Standard Test Method for Density of Liquid Coatings, Inks, and Related Products'' (incorporated by reference, see § 63.14), information from the supplier or manufacturer of the material, or specific gravity data for pure chemicals. 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 unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(d) *Determine the organic HAP content of each coating.* Calculate the organic HAP content, kg (lb) of organic HAP emitted per liter (gal) coating solids used, of each coating used during the compliance period using Equation 2 of this section:

$$H_c = \frac{(D_c)(W_c)}{V_s} \qquad \text{(Eq. 2)}$$

Where:

H_c = Organic HAP content of the coating, kg organic HAP emitted per liter (gal) coating solids used.

D_c = Density of coating, kg coating per liter (gal) 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 (gal) coating solids per liter (gal) 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 limit in § 63.3890; and each thinner and/or other additive, 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 limit in § 63.3890, and you used no thinners and/or other additives, or cleaning materials that contained organic HAP, determined according to the procedures in 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 2 of § 63.3941) exceeds the applicable emission limit in § 63.3890, and use no thinner and/or other additive, 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. If you are complying with a facility-specific emission limit under § 63.3890(c), you must also perform the calculation using Equation 1 in § 63.3890(c)(2) on a monthly basis using the data from the previous 12 months of operation.

(b) If you choose to comply with the emission limitations by using the compliant material option, the use of any coating, thinner and/or other additive, 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 applicable emission limit 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 coatings for which the organic HAP content exceeded the applicable emission limit in § 63.3890, and you used no thinner and/or other additive, 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 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coating solids used each month and then calculate an organic HAP emission rate at the end of the initial 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 conduct a separate initial compliance demonstration for each general use, magnet wire, rubber-to-metal, and extreme performance fluoropolymer coating operation unless you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in § 63.3890(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in § 63.3890(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners and/or other additives, 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 and/or other additives, or cleaning materials that have been reclaimed on-site (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coating operation for which you use the emission rate without add-on controls option. If you use coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site, the amount of each used in a month may be reduced by the amount of each that is reclaimed. That is, the amount used may be calculated as the amount consumed to account for materials that are reclaimed.

(a) *Determine the mass fraction of organic HAP for each material.* Determine the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each month according to the requirements in § 63.3941(a).

(b) *Determine the volume fraction of coating solids.* Determine the volume fraction of coating solids (liter (gal) of coating solids per liter (gal) of coating) 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 liquid coating, thinner and/or other additive, and cleaning material used during each month from test results using ASTM Method D1475–98, ‘‘Standard Test Method for Density of Liquid Coatings, Inks, and Related Products’’ (incorporated by reference, see § 63.14), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If you are including powder coatings in the compliance determination, determine the density of powder coatings, using ASTM Method D5965–02, ‘‘Standard Test Methods for Specific Gravity of Coating Powders’’ (incorporated by reference, see § 63.14), or information from the supplier. If there is disagreement between ASTM Method D1475–98 or ASTM Method D5965–02 test results and other such information sources, the test results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct. If you purchase materials or monitor consumption by weight instead of volume, you do not need to determine material density. Instead, you may use the material weight in place of the combined terms for density and volume in Equations 1A, 1B, 1C, and 2 of this section.

(d) *Determine the volume of each material used.* Determine the volume (liters) of each coating, thinner and/or other additive, and cleaning material used during each month by measurement or usage records. If you purchase materials or monitor consumption by weight instead of volume, you do not need to determine the volume of each material used. Instead, you may use the material weight in place of the combined terms for density and volume in Equations 1A, 1B, and 1C of this section.

(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/or other additives, 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.

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

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 and/or other additives 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:

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

Where:

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

$Vol_{c,i}$ = 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. For reactive adhesives as defined in § 63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

m = Number of different coatings used during the month.

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

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

Where:

B = Total mass of organic HAP in the thinners and/or other additives used during the month, kg.

$Vol_{t,j}$ = Total volume of thinner and/or other additive, j, used during the month, liters.

$D_{t,j}$ = Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$ = Mass fraction of organic HAP in thinner and/or other additive, j, kg organic HAP per kg thinner and/or other additive. For reactive adhesives as defined in § 63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

n = Number of different thinners and/or other additives used during the month.

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

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

Where:

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

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

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

$W_{s,k}$ = Mass fraction of organic HAP in cleaning material, k, kg 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 the mass according to paragraphs (e)(4)(i) through (iv) of this section.

(i) You may only include waste materials in the determination that are generated by coating operations in the affected source for which you use Equation 1 of this section and that will be treated or disposed of by a facility that is 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 methodology you use to determine the amount of waste materials and the total mass of organic HAP they contain, as required in § 63.3930(h). If 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:

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

Where:

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

$Vol_{c,i}$ = 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 compliance period, kg (lb) organic HAP emitted per liter (gal) coating solids used, using Equation 3 of this section:

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

Where:

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

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.

n = Number of full or partial months in the compliance period (for the initial compliance period, n equals 12 if the compliance date falls on the first day of a month; otherwise n equals 13; for all following compliance periods, n equals 12).

(h) *Compliance demonstration.* The organic HAP emission rate for the initial compliance period calculated using Equation 3 of this section must be less than or equal to the applicable emission limit for each subcategory in § 63.3890 or the predominant activity or facility-specific emission limit allowed in

§ 63.3890(c). 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 the procedures in 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. If you are complying with a facility-specific emission limit under § 63.3890(c), you must also perform the calculation using Equation 1 in § 63.3890(c)(2) on a monthly basis using the 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)(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. For magnet wire coating operations you may, with approval, conduct a performance test of one representative magnet wire coating machine for each group of identical or very similar magnet wire coating machines.

(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 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coatings solids used each month and then calculate an organic HAP emission rate at the end of the initial 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. For magnet wire coating operations, you must begin complying with the operating limits for all identical or very similar magnet wire coating machines on the date you complete the performance test of a representative magnet wire coating machine. The requirements in this paragraph (a)(4) 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 magnet wire coating operations and 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 magnet wire coating operations, you may, with approval, conduct a performance test of a single magnet wire coating machine that represents identical or very similar magnet wire coating machines. 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 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coatings solids used each month and then calculate an organic HAP emission rate at the end of the initial 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.

(c) You are not required to conduct an initial performance test to determine capture efficiency or destruction efficiency of a capture system or control device if you receive approval to use the results of a performance test that has been previously conducted on that capture system or control device. Any such previous tests must meet the conditions described in paragraphs (c)(1) through (3) of this section.

(1) The previous test must have been conducted using the methods and conditions specified in this subpart.

(2) Either no process or equipment changes have been made since the previous test was performed or the owner or operator must be able to demonstrate that the results of the performance test, reliably demonstrate compliance despite process or equipment changes.

(3) Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the required operating parameters.

§ 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 conduct a separate initial compliance demonstration for each general use, magnet wire, rubber-to-metal, and extreme performance fluoropolymer coating operation, unless you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in § 63.3890(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in § 63.4490(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners and/or other additives, 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 and/or other additives, or cleaning materials that have been reclaimed onsite (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coatings operation(s) for which you use the emission rate with add-on controls option. If you use coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site, the amount of each used in a month may be reduced by the amount of each that is reclaimed. That is, the amount used may be calculated as the amount consumed to account for materials that are reclaimed.

(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 for each affected source in each subcategory.

(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/or other additive, 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/or other additives, 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.* Use Equation 1 of this section to calculate the 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. 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/or other additives, and cleaning materials that are used in the coating operation served by the emission capture system and add-on control device during each month. You must assume zero efficiency for the emission capture system and add-on control device 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, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device and the use of these data is approved by the Administrator. Equation 1 of this section treats the materials used during such a deviation as if they were used on an uncontrolled coating operation for the time period of the deviation.

$$H_C = \left(A_C + B_C + C_C - R_W - H_{UNC}\right)\left(\frac{CE}{100} \times \frac{DRE}{100}\right) \qquad \text{(Eq. 1)}$$

Where:

H_C = Mass of organic HAP emission reduction for the controlled coating operation during the month, kg.

A_C = Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg, as calculated in Equation 1A of this section.

B_C = Total mass of organic HAP in the thinners and/or other additives 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.

R_W = Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the compliance period, kg, determined according to § 63.3951(e)(4). (You may assign a value of zero to R_W if you do not wish to use this allowance.)

H_{UNC} = Total mass of organic HAP in the coatings, thinners and/or other additives, 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 (lb), using Equation 1A of this section:

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

Where:

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

$Vol_{c,i}$ = 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. For reactive adhesives as defined in § 63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

m = Number of different coatings used.

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

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

Where:

B_C = Total mass of organic HAP in the thinners and/or other additives used in the controlled coating operation during the month, kg.

$Vol_{t,j}$ = Total volume of thinner and/or other additive, j, used during the month, liters.

$D_{t,j}$ = Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$ = Mass fraction of organic HAP in thinner and/or other additive, j, kg per kg. For reactive adhesives as defined in § 63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

n = Number of different thinners and/or other additives used.

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

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

Where:

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

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

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

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

p = Number of different cleaning materials used.

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

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

Where:

H_{UNC} = Total mass of organic HAP in the coatings, thinners and/or other additives, 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.

Vol_h = Total volume of coating, thinner and/or other additive, or cleaning material, h, used in the controlled coating operation during deviations, liters.

D_h = Density of coating, thinner and/or other additives, or cleaning material, h, kg per liter.

W_h = Mass fraction of organic HAP in coating, thinner and/or other additives, or cleaning material, h, kg organic HAP per kg coating. For reactive adhesives as defined in § 63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

q = Number of different coatings, thinners and/or other additives, and cleaning materials used.

(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/or other additives, 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, 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/or other additive, 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 take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(4) Determine the density of each coating, thinner and/or other additive, 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/or other additive, 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:

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

Where:

R_V = Volatile organic matter collection and recovery efficiency of the solvent recovery system during the month, percent.

M_{VR} = Mass of volatile organic matter recovered by the solvent recovery system during the month, kg.

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

D_i = Density of coating, i, kg per liter.

$WV_{c,i}$ = Mass fraction of volatile organic matter for coating, i, kg volatile organic matter per kg coating. For reactive adhesives as defined in § 63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

Vol_j = Volume of thinner and/or other additive, j, used in the coating operation controlled by the solvent recovery system during the month, liters.

D_j = Density of thinner and/or other additive, j, kg per liter.

$WV_{t,j}$ = Mass fraction of volatile organic matter for thinner and/or other additive, j, kg volatile organic matter per kg thinner and/or other additive. For reactive adhesives as defined in § 63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

Vol_k = Volume of cleaning material, k, used in the coating operation controlled by the solvent recovery system during the month, liters.

D_k = Density of cleaning material, k, kg per liter.

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

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

n = Number of different thinners and/or other additives used in the coating operation controlled by the solvent recovery system during the month.

p = Number of different cleaning materials used in the coating operation controlled by the solvent recovery system during the month.

(7) Calculate the mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system during the month, using Equation 3 of this section and according to paragraphs (j)(7)(i) through (iii) of this section:

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

Where:

H_{CSR} = Mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system using a liquid-liquid material balance during the month, kg.

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

B_{CSR} = Total mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3B of this section.

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

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

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

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

Where:

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

$Vol_{c,i}$ = Total volume of coating, i, used during the month in the coating operation controlled by the solvent recovery system, liters.

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

$W_{c,i}$ = Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating. For reactive adhesives as defined in § 63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

m = Number of different coatings used.

(ii) Calculate the mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system, kg, using Equation 3B of this section:

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

Where:

B_{CSR} = Total mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{t,j}$ = Total volume of thinner and/or other additive, j, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{t,j}$ = Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$ = Mass fraction of organic HAP in thinner and/or other additive, j, kg lb organic HAP per kg thinner and/ or other additive. For reactive adhesives as defined in § 63.3981, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to subpart PPPP of this part.

n = Number of different thinners and/ or other additives used.

(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:

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

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 organic HAP per kg cleaning material.

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:

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

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/ or other additives, 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 controlled by a solvent recovery system 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 compliance period.* Determine the organic HAP emission rate for the compliance period, kg (lb) of organic HAP emitted per liter (gal) coating solids used, using Equation 5 of this section:

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

Where:

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

$H_{HAP,y}$ = Organic HAP emissions for month, y, kg, 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 = Number of full or partial months in the compliance period (for the initial compliance period, n equals 12 if the compliance date falls on the first day of a month; otherwise n equals 13; for all following compliance periods, n equals 12).

(n) *Compliance demonstration.* The organic HAP emission rate for the initial compliance period, calculated using Equation 5 of this section, must be less than or equal to the applicable emission limit for each subcategory in § 63.3890 or the predominant activity or facility-specific emission limit allowed in § 63.3890(c). 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. If you are complying with a facility-specific emission limit under § 63.3890(c), you must also perform the calculation using Equation 1 in § 63.3890(c)(2) on a monthly basis using the 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 that 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, when the coating line is in operation.

(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, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device and the use of these data is approved by the Administrator.

(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(c).

(h) [Reserved]

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

(b) *Measuring capture efficiency.* If the capture system does not meet both of the criteria in paragraphs (a)(1) and (2) of this section, then you must use one of the three protocols described in paragraphs (c), (d), and (e) of this section to measure capture efficiency. The capture efficiency measurements use TVH capture efficiency as a surrogate for organic HAP capture efficiency. For the protocols in paragraphs (c) and (d) of this section, the capture efficiency measurement must consist of three test runs. Each test run must be at least 3 hours 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 the production, which includes surface preparation activities and drying and 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/or other additives, and cleaning materials are applied, and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions for routing to an add-on control device, such as the entrance and exit areas of an oven or spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.

(2) Use Method 204A or 204F of appendix M to 40 CFR part 51 to determine the mass fraction of TVH liquid input from each coating, thinner and/or other additive, 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 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/or other additives, and cleaning materials used in the coating operation during each capture efficiency test run:

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

Where:

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

TVH_i = Mass fraction of TVH in coating, thinner and/or other additive, or cleaning material, i, that is used in the coating operation during the capture efficiency test run, kg TVH per kg material.

Vol_i = Total volume of coating, thinner and/or other additive, or cleaning material, i, used in the coating operation during the capture efficiency test run, liters.

D_i = Density of coating, thinner and/or other additive, or cleaning material, i, kg material per liter material.

n = Number of different coatings, thinners and/or other additives, and cleaning materials used in the coating operation during the capture efficiency test run.

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

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

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

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

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

Where:

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

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

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

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

(d) *Gas-to-gas protocol using a temporary total enclosure or a building enclosure.* The gas-to-gas protocol compares the mass of TVH emissions captured by the emission capture system 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/or other additives, and cleaning materials are applied, and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions generated by the coating operation for routing to an add-on control device, such as the entrance and exit areas of an oven or a spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.

(2) Use Method 204B or 204C of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions captured by the emission

capture system during each capture efficiency test run as measured at the inlet to the add-on control device. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

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

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

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

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

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

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

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

Where:

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

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

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

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

(e) *Alternative capture efficiency protocol.* As an alternative to the procedures specified in paragraphs (c) and (d) of this section and subject to the approval of the Administrator, 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. If the source is a magnet wire coating machine, you may use the procedures in section 3.0 of appendix A to this subpart as an alternative.

(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.

(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 to the atmosphere of each device. For example, if one add-on control device is a concentrator with an outlet to the atmosphere 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 to the atmosphere for the low-volume concentrated stream that is treated with the oxidizer, you must measure emissions at the outlet of the oxidizer and the high volume dilute stream outlet of the concentrator.

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

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

Where:

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

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

Q_{sd} = Volumetric flow rate of gases entering or exiting the add-on control device, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters/hour (dscm/h).

0.0416 = Conversion factor for molar volume, kg-moles per cubic meter (mol/m^3) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg).

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

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

Where:

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

M_{fi} = Total gaseous organic emissions mass flow rate at the inlet(s) to the add-on control device, using Equation 1 of this section, kg/h.

M_{fo} = Total gaseous organic emissions mass flow rate at the outlet(s) of the add-on control device, using Equation 1 of this section, kg/h.

(f) Determine the emission destruction or removal efficiency of the add-on control device as the average of the efficiencies determined in the three test runs and calculated in Equation 2 of this section.

§ 63.3967 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. If the source is a magnet wire coating machine, you may use the procedures in section 3.0 of appendix A to this subpart as an alternative.

(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) You must 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. If problems are found during the catalyst activity test, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations.

(ii) Monthly external inspection of the catalytic 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 inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found during the annual internal inspection of the catalyst, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations. If the catalyst bed is replaced and is not of like or better kind and quality as the old catalyst then you must conduct a new performance test to determine destruction efficiency according to § 63.3966. If a catalyst bed is replaced and the replacement catalyst is of like or better kind and quality as the old catalyst, then a new performance test to determine destruction efficiency is not required and you may continue to use the previously established operating limits for that catalytic oxidizer.

(c) *Regenerative carbon adsorbers.* If your add-on control device is a regenerative 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 regenerative 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 minimum 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. If the source is a magnet wire coating machine, you may use the procedures in section 2.0 of appendix A to this subpart as an alternative.

(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 (v) 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.

(v) *Flow direction indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow direction 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. Each time the flow direction changes, the next reading of the time of occurrence and flow direction must be recorded. The flow direction indicator must be installed in each bypass line or air makeup supply line that could divert the emissions away from the add-on control device to the atmosphere.

(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 upstream and/or downstream of the catalyst bed as required in § 63.3967(b).

(3) For all thermal oxidizers and catalytic oxidizers, you must meet the requirements in paragraphs (a) and (c)(3)(i) through (v) 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 5 degrees Fahrenheit or 1.0 percent of the temperature value, whichever is larger.

(iii) Before using the sensor for the first time or when relocating or replacing the sensor, perform a validation check by comparing the sensor output to a calibrated temperature measurement device or by comparing the sensor output to a simulated temperature.

(iv) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor output to redundant temperature sensors, to calibrated temperature measurement devices, or to temperature simulation devices.

(v) Conduct a visual inspection of each sensor every quarter if redundant temperature sensors are not used.

(d) *Regenerative carbon adsorbers.* If you are using a regenerative carbon adsorber as an add-on control device, you must monitor the total regeneration desorbing gas (*e.g.*, steam or nitrogen) mass flow for each regeneration cycle, the carbon bed temperature after each regeneration and cooling cycle, and comply with paragraphs (a)(3) through (5) and (d)(1) through (3) 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 be capable of recording the temperature within 15 minutes of completing any carbon bed cooling cycle.

(3) For all regenerative carbon adsorbers, you must meet the requirements in paragraphs (c)(3)(i) through (v) of this section for each temperature monitoring device.

(e) *Condensers.* If you are using a condenser, you must monitor the condenser outlet (product side) gas temperature and comply with paragraphs (a) and (e)(1) and (2) of this section.

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

(2) For all condensers, you must meet the requirements in paragraphs (c)(3)(i) through (v) of this section for each temperature monitoring device.

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

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

(2) You must install a device to monitor pressure drop across the zeolite wheel or rotary carbon bed. The pressure monitoring device must meet the requirements in paragraphs (a) and (g)(2) of this section.

(g) *Emission capture systems.* The capture system monitoring system must comply with the applicable requirements in paragraphs (g)(1) and (2) of this section. If the source is a magnet wire coating machine, you may use the procedures in section 2.0 of appendix A to this subpart as an alternative.

(1) For each flow measurement device, you must meet the requirements in paragraphs (a) and (g)(1)(i) through (vii) 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) Use a flow sensor with an accuracy of at least 10 percent of the flow.

(iii) Perform an initial sensor calibration in accordance with the manufacturer's requirements.

(iv) Perform a validation check before initial use or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values with electronic signal simulations or via relative accuracy testing.

(v) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor values with electronic signal simulations or via relative accuracy testing.

(vi) Perform leak checks monthly.

(vii) Perform visual inspections of the sensor system quarterly if there is no redundant sensor.

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

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

(ii) Use a pressure sensor with an accuracy of at least 0.5 inches of water column or 5 percent of the measured value, whichever is larger.

(iii) Perform an initial calibration of the sensor according to the manufacturer's requirements.

(iv) Conduct a validation check before initial operation or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.

(v) Conduct accuracy audits every quarter and after every deviation. Accuracy audits include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.

(vi) Perform monthly leak checks on pressure connections. A pressure of at least 1.0 inches of water column to the connection must yield a stable sensor result for at least 15 seconds.

(vii) Perform a visual inspection of the sensor at least monthly if there is no redundant sensor.

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. Environmental Protection Agency (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 listed in paragraphs (c)(1) through (4) of this section:

(1) Approval of alternatives to the requirements in § 63.3881 through 3883 and § 63.3890 through 3893.

(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, and in this section as follows:

Additive means a material that is added to a coating after purchase from a supplier (*e.g.*, catalysts, activators, accelerators).

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, adhesive coating means any chemical substance that is applied for the purpose of bonding two surfaces together. Products used on humans and animals, adhesive tape, contact paper, or any other product with an adhesive incorporated onto or in an inert substrate shall not be considered adhesives under this subpart.

Assembled on-road vehicle coating means any coating operation in which coating is applied to the surface of some component or surface of a fully assembled motor vehicle or trailer intended for on-road use including, but not limited to, components or surfaces on automobiles and light-duty trucks that have been repaired after a collision or otherwise repainted, fleet delivery trucks, and motor homes and other recreational vehicles (including camping trailers and fifth wheels). Assembled on-road vehicle coating includes the concurrent coating of parts of the assembled on-road vehicle that are painted off-vehicle to protect systems, equipment, or to allow full coverage. Assembled on-road vehicle coating does not include surface coating operations that meet the applicability criteria of the automobiles and light-duty trucks NESHAP. Assembled on-road vehicle coating also does not include the use of adhesives, sealants, and caulks used in assembling on-road vehicles.

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 and 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 or paint stripping), 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, liquid plastic coatings, 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, or paper film or plastic film which may be pre-coated with an adhesive by the film manufacturer, are not considered coatings for the purposes of this subpart. A liquid plastic coating means a coating made from fine particle-size polyvinyl chloride (PVC) in solution (also referred to as a plastisol).

Coating operation means equipment used to apply cleaning materials to a substrate to prepare it for coating application (surface preparation) or to remove dried coating; 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 given quantity of coating or cleaning material is applied to a given part and all subsequent points in the affected source where organic HAP are emitted from the specific quantity of coating or cleaning material on the specific part. There may be multiple coating operations in an affected source. Coating application with handheld, non-refillable aerosol containers, touch-up markers, or marking pens is not a coating operation for the purposes of this subpart.

Coatings 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 the aggregate of all requirements associated with a compliance option including emission limit, operating limit, work practice standard, etc.

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).

Extreme performance fluoropolymer coating means coatings that are formulated systems based on fluoropolymer resins which often contain bonding matrix polymers dissolved in non-aqueous solvents as well as other ingredients. Extreme performance fluoropolymer coatings are typically used when one or more critical performance criteria are required including, but not limited to a nonstick low-energy surface, dry film lubrication, high resistance to chemical attack, extremely wide operating temperature, high electrical insulating properties, or that the surface comply with government (*e.g.*, USDA, FDA) or third party specifications for health, safety, reliability, or performance. Once applied to a substrate, extreme performance fluoropolymer coatings undergo a curing process that typically requires high temperatures, a chemical reaction, or other specialized technology.

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, magnet wire coating, or extreme performance fluoropolymer 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 605.2–2000.

High performance coating means any coating that meets the definition of high performance architectural coating or high temperature 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 Celsius (1000 degrees Fahrenheit).

Hobby shop means any surface coating operation, located at an affected source, that is used exclusively for personal, noncommercial purposes by the affected source's employees or assigned personnel.

Magnet wire coatings, commonly referred to as magnet wire enamels, are applied to a continuous strand of wire which will be used to make turns (windings) in electrical devices such as coils, transformers, or motors. Magnet wire coatings provide high dielectric strength and turn-to-turn conductor insulation. This allows the turns of an electrical device to be placed in close proximity to one another which leads to increased coil effectiveness and electrical efficiency.

Magnet wire coating machine means equipment which applies and cures magnet wire coatings.

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.

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.

Non-HAP coating means, for the purposes of this subpart, a coating that contains no more than 0.1 percent by mass of any individual organic HAP that is an OSHA-defined carcinogen as specified in 29 CFR 1910.1200(d)(4) and no more than 1.0 percent by mass for any other individual HAP.

Organic HAP content means the mass of organic HAP emitted per volume of coating solids used for a coating calculated using Equation 2 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. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, organic HAP content is the mass of organic HAP that is emitted, rather than the organic HAP content of the coating as it is received.

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.

Personal watercraft means a vessel (boat) which uses an inboard motor powering a water jet pump as its primary source of motive power and which is designed to be operated by a person or persons sitting, standing, or kneeling on the vessel, rather than in the conventional manner of sitting or standing inside the vessel.

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. Protective oils used on miscellaneous metal parts and products include magnet wire lubricants and soft temporary protective coatings that are removed prior to installation or further assembly of a part or component.

Reactive adhesive means adhesive systems composed, in part, of volatile monomers that react during the adhesive curing reaction, and, as a result, do not evolve from the film during use. These volatile components instead become integral parts of the adhesive through chemical reaction. At least 70 percent of the liquid components of the system, excluding water, react during the process.

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 coatings are coatings that contain heat-activated polymer systems in either solvent or water that, when applied to metal substrates, dry to a non-tacky surface and react chemically with the rubber and metal during a vulcanization process.

Startup, initial means the first time equipment is brought online in a facility.

Surface preparation means use of a cleaning material on a portion of or all of a substrate. This includes use of a cleaning material to remove dried coating, which is sometimes called depainting.

Temporary total enclosure means an enclosure constructed for the purpose of measuring the capture efficiency of pollutants emitted from a given source as defined in Method 204 of appendix M, 40 CFR part 51.

Thinner means an organic solvent that is added to a coating after the coating is received from the supplier.

Total volatile hydrocarbon (TVH) means the total amount of nonaqueous volatile organic matter determined according to Methods 204 and 204A through 204F of appendix M to 40 CFR part 51 and substituting the term TVH each place in the methods where the term VOC is used. The TVH includes both VOC and non-VOC.

Uncontrolled coating operation means a coating operation from which none of the organic HAP emissions are routed through an emission capture system and add-on control device.

Volatile organic compound (VOC) means any compound defined as VOC in 40 CFR 51.100(s).

Volume fraction of coating solids means the ratio of the volume of coating solids (also known as the volume of nonvolatiles) to the volume of a coating in which it is contained; liters (gal) of coating solids per liter (gal) of coating.

Wastewater means water that is generated in a coating operation and is collected, stored, or treated prior to being discarded or discharged.

Tables to Subpart MMMM of Part 63

If you are required to comply with operating limits by § 63.3892(c), 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 by . . .
1. Thermal oxidizer	a. The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to § 63.3967(a).	i. Collecting the combustion temperature 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) (for magnet wire coating machines, temperature can be monitored before or after the catalyst bed); and either	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 (or for magnet wire coating machines after) the catalyst bed at or above the temperature limit.
	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	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.
	c. Develop and implement an inspection and maintenance plan according to § 63.3967(b)(4) or for magnet wire coating machines according to section 3.0 of appendix A to this subpart.	i. Maintaining and 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) or for magnet wire coating machines by section 3.0 of appendix A to this subpart, you must take corrective action as soon as practicable consistent with the manufacturer's recommendations.
3. Regenerative 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); and	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.
	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 temperature of the carbon bed after completing each regeneration and any cooling 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 of the desorption concentrate stream in any 3-hour period must not fall below the limit established according to § 63.3967(e); and	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.

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 by . . .
	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 pressure drop data according to 63.3968(f); 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.
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	i. Collecting the direction of air flow, and either the facial velocity of air through all natural draft openings according to § 63.3968(b)(1) or the pressure drop across the enclosure 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 the enclosure at all times.
	b. The average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minutes; or	i. See items 6.a.i and 6.a.ii.
	c. The pressure drop across the enclosure must be at least 0.007 inch H_2O, as established in Method 204 of appendix M to 40 CFR part 51.	i. See items 6.a.i and 6.a.ii.
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 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 limited.

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 of Part 63

Citation	Subject	Applicable to subpart MMMM	Explanation
§ 63.1(a)(1)–(14)	General Applicability	Yes.	
§ 63.1(b)(1)–(3)	Initial Applicability Determination	Yes	Applicability to subpart MMMM is also specified in § 63.3881.
§ 63.1(c)(1)	Applicability After Standard Established	Yes.	
§ 63.1(c)(2)–(3)	Applicability of Permit Program for Area Sources.	No	Area sources are not subject to subpart MMMM.
§ 63.1(c)(4)–(5)	Extensions and Notifications	Yes.	
§ 63.1(e)	Applicability of Permit Program Before Relevant Standard is Set.	Yes.	
§ 63.2	Definitions	Yes	Additional definitions are specified in § 63.3981.
§ 63.1(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.	
§ 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	Section 63.3883 specifies the compliance dates.

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

Citation	Subject	Applicable to subpart MMMM	Explanation
§ 63.6(e)(1)–(2)	Operation and Maintenance	Yes.	
§ 63.6(e)(3)	Startup, Shutdown, and Malfunction Plan.	Yes	Only sources using an add-on control device to comply with the standard must complete startup, shutdown, and malfunction plans.
§ 63.6(f)(1)	Compliance Except During Startup, Shutdown, and Malfunction.	Yes	Applies only to sources using an add-on control device to comply with the standard.
§ 63.6(f)(2)–(3)	Methods for Determining Compliance.	Yes.	
§ 63.6(g)(1)–(3)	Use of an Alternative Standard	Yes.	
§ 63.6(h)	Compliance With Opacity/Visible Emission Standards.	No	Subpart 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 standard. 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	§ 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.	

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

Citation	Subject	Applicable to subpart MMMM	Explanation
§ 63.8(c)(8)	CMS Out-of-Control Periods and Reporting.	No	§ 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/Opacity Test.	No	Subpart MMMM does not have opacity or visible emissions standards.
§ 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, and malfunction records only apply to add-on control devices used to comply with the standard.
§ 63.10(b)(2) (vi)–(xi)		Yes.	
§ 63.10(b)(2) (xii)	Records	Yes.	
§ 63.10(b)(2) (xiii)		No	Subpart MMMM does not require the use of continuous emissions monitoring systems.
§ 63.10(b)(2) (xiv)		Yes.	
§ 63.10(b)(3)	Recordkeeping Requirements for Applicability Determinations.	Yes.	
§ 63.10(c) (1)–(6)	Additional Recordkeeping Requirements for Sources with CMS.	Yes.	
§ 63.10(c) (7)–(8)		No	The same records are required in § 63.3920(a)(7).
§ 63.10(c) (9)–(15)		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 MMMMM 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.	

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

Citation	Subject	Applicable to subpart MMMM	Explanation
§ 63.13	Addresses	Yes.	
§ 63.14	Incorporation by Reference	Yes.	
§ 63.15	Availability of Information/Confidentiality	Yes.	

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data and which match either the solvent blend name or the chemical abstract series (CAS) number. If a solvent blend matches both the name and CAS number for an entry, that entry's organic HAP mass fraction must be used for that solvent blend. Otherwise, use the organic HAP mass fraction for the entry matching either the solvent blend name or CAS number, or use the organic HAP mass fraction from table 4 to this subpart if neither the name or CAS number match.

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

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

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

[b] Mineral Spirits 135, Mineral Spirits 150 EC, Naphtha, Mixed Hydrocarbon, Aliphatic Hydrocarbon, Aliphatic Naphtha, Naphthol Spirits, Petroleum Spirits, Petroleum Oil, Petroleum Naphtha, Solvent Naphtha, Solvent Blend.

[c] Medium-flash Naphtha, High-flash Naphtha, Aromatic Naphtha, Light Aromatic Naphtha, Light Aromatic Hydrocarbons, Aromatic Hydrocarbons, Light Aromatic Solvent.

Appendix A to Subpart MMMM of Part 63—Alternative Capture Efficiency and Destruction Efficiency Measurement and Monitoring Procedures for Magnet Wire Coating Operations

1.0 Introduction.

1.1 These alternative procedures for capture efficiency and destruction efficiency measurement and monitoring are intended principally for newer magnet wire coating machines where the control device is internal and integral to the oven so that it is difficult or infeasible to make gas measurements at the inlet to the control device.

1.2 In newer gas fired magnet wire ovens with thermal control (no catalyst), the burner tube serves as the control device (thermal oxidizer) for the process. The combustion of solvents in the burner tube is the principal source of heat for the oven.

1.3 In newer magnet wire ovens with a catalyst there is either a burner tube (gas fired ovens) or a tube filled with electric heating elements (electric heated oven) before the catalyst. A large portion of the solvent is often oxidized before reaching the catalyst. The combustion of solvents in the tube and across the catalyst is the principal source of heat for the oven. The internal catalyst in these ovens cannot be accessed without disassembly of the oven. This disassembly includes removal of the oven insulation. Oven reassembly often requires the installation of new oven insulation.

1.4 Some older magnet wire ovens have external afterburners. A significant portion of the solvent is oxidized within these ovens as well.

1.5 The alternative procedure for destruction efficiency determines the organic carbon content of the volatiles entering the control device based on the quantity of coating used, the carbon content of the volatile portion of the coating and the efficiency of the capture system. The organic carbon content of the control device outlet (oven exhaust for ovens without an external afterburner) is determined using Method 25 or 25A.

1.6 When it is difficult or infeasible to make gas measurements at the inlet to the control device, measuring capture efficiency with a gas-to-gas protocol (see § 63.3965(d)) which relies on direct measurement of the captured gas stream will also be difficult or infeasible. In these situations, capture efficiency measurement is more appropriately done with a procedure which does not rely on direct measurement of the captured gas stream.

1.7 Magnet wire ovens are relatively small compared to many other coating ovens. The exhaust rate from an oven is low and varies as the coating use rate and solvent loading rate change from job to job. The air balance in magnet wire ovens is critical to product quality. Magnet wire ovens must be operated under negative pressure to avoid smoke and odor in the workplace, and the exhaust rate must be sufficient to prevent over heating within the oven.

1.8 The liquid and gas measurements needed to determine capture efficiency and control device efficiency using these alternative procedures may be made simultaneously.

1.9 Magnet wire facilities may have many (*e.g.*, 20 to 70 or more) individual coating lines each with its own capture and control system. With approval, representative capture efficiency and control device efficiency testing of one magnet wire coating machine out of a group of identical or very similar magnet wire coating machines may be performed rather than testing every individual magnet wire coating machine. The operating parameters must be established for each tested magnet wire coating machine during each capture efficiency test and each control device efficiency test. The operating parameters established for each tested magnet wire coating machine also serve as the operating parameters for untested or very similar magnet wire coating machines represented by a tested magnet wire coating machine.

2.0 Capture Efficiency.

2.1 If the capture system is a permanent total enclosure as described in § 63.3965(a), then its capture efficiency may be assumed to be 100 percent.

2.2 If the capture system is not a permanent total enclosure, then capture efficiency must be determined using the liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure in § 63.3965(c), or an alternative capture efficiency protocol (see § 63.3965(e)) which does not rely on direct measurement of the captured gas stream.

2.3 As an alternative to establishing and monitoring the capture efficiency operating parameters in § 63.3967(f), the monitoring described in either section 2.4 or 2.5, and the monitoring described in sections 2.6 and 2.7 may be used for magnet wire coating machines.

2.4 Each magnet wire oven must be equipped with an interlock mechanism which will stop or prohibit the application of coating either when any exhaust fan for that oven is not operating or when the oven experiences an over limit temperature condition.

2.5 Each magnet wire oven must be equipped with an alarm which will be activated either when any oven exhaust fan is not operating or when the oven experiences an over limit temperature condition.

2.6 If the interlock in 2.4 or the alarm in 2.5 is monitoring for over limit temperature conditions, then the temperature(s) that will trigger the interlock or the alarm must be included in the start-up, shutdown and malfunction plan and the interlock or alarm must be set to be activated when the oven reaches that temperature.

2.7 Once every 6 months, each magnet wire oven must be checked using a smoke stick or equivalent approach to confirm that the oven is operating at negative pressure compared to the surrounding atmosphere.

3.0 Control Device Efficiency.

3.1 Determine the weight fraction carbon content of the volatile portion of each coating, thinner, additive, or cleaning material used during each test run using either the procedure in section 3.2 or 3.3.

3.2 Following the procedures in Method 204F, distill a sample of each coating, thinner, additive, or cleaning material used during each test run to separate the volatile portion. Determine the weight fraction carbon content of each distillate using ASTM Method D5291–02, ‘‘Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants’’ (incorporated by reference, see § 63.14).

3.3 Analyze each coating, thinner, additive or cleaning material used during each test run using Method 311. For each volatile compound detected in the gas chromatographic analysis of each coating, thinner, additive, or cleaning material calculate the weight fraction of that whole compound in the coating, thinner, additive, or cleaning material. For each volatile compound detected in the gas chromatographic analysis of each coating, thinner, additive, or cleaning material calculate the weight fraction of the carbon in that compound in the coating, thinner, additive, or cleaning material. Calculate the weight fraction carbon content of each coating, thinner, additive, or cleaning material as the ratio of the sum of the carbon weight fractions divided by the sum of the whole compound weight fractions.

3.4 Determine the mass fraction of total volatile hydrocarbon (TVH_i) in each coating, thinner, additive, or cleaning material, i, used during each test run using Method 24. The mass fraction of total volatile hydrocarbon equals the weight fraction volatile matter (W_v in Method 24) minus the weight fraction water (W_w in Method 24), if any, present in the coating. The ASTM Method D6053–00, ‘‘Standard Test Method for Determination of Volatile Organic Compound (VOC) Content of Electrical Insulating Varnishes’’ (incorporated by reference, see § 63.14), may be used as an alternative to Method 24 for magnet wire enamels. The specimen size for testing magnet wire enamels with ASTM Method D6053–00 must be 2.0 ± 0.1 grams.

3.5 Determine the volume (VOL_i) or mass ($MASS_i$) of each coating, thinner, additive, or cleaning material, i, used during each test run.

3.6 Calculate the total volatile hydrocarbon input ($TVHC_{inlet}$) to the control device during each test run, as carbon, using Equation 1:

$$TVHC_{inlet} = \sum_{i=1}^{n} (TVH_i \times VOL_i \times D_i \times CD_i) \qquad \text{(Eq. 1)}$$

where:

TVH_i = Mass fraction of TVH in coating, thinner, additive, or cleaning material, i, used in the coating operation during the test run.

VOL_i = Volume of coating, thinner, additive, or cleaning material, i, used in the coating operation during the test run, liters.

D_i = Density of coating, thinner, additive, or cleaning material, i, used in the coating operation during the test run, kg per liter.

CD_i = Weight fraction carbon content of the distillate from coating, thinner, additive, or cleaning material, i, used in the coating operation during the test run, percent.

n = Number of coating, thinner, additive, and cleaning materials used in the coating operation during the test run.

3.7 If the mass, $MASS_i$, of each coating, solvent, additive, or cleaning material, i, used during the test run is measured directly then $MASS_i$ can be substituted for $VOL_i \times D_i$ in Equation 1 in section 3.6.

3.8 Determine the TVHC output ($TVHC_{outlet}$) from the control device, as carbon, during each test run using the methods in § 63.3966(a) and the procedure for determining M_{fo} in § 63.3966(d). $TVHC_{outlet}$ equals M_{fo} times the length of the test run in hours.

3.9 Determine the control device efficiency (DRE) for each test run using Equation 2:

$$DRE = \frac{\left(TVHC_{inlet} - TVHC_{outlet}\right)}{TVHC_{inlet}} \times 100 \qquad \text{(Eq. 2)}$$

3.10 The efficiency of the control device is the average of the three individual test run values determined in section 3.9.

3.11 As an alternative to establishing and monitoring the destruction efficiency operating parameters for catalytic oxidizers in § 63.3967(b), the monitoring described in sections 3.12 and 3.13 may be used for magnet wire coating machines equipped with catalytic oxidizers.

3.12 During the performance test, you must monitor and record the temperature either just before or just after 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 either just before or just after the catalyst bed during the performance test. This is the minimum operating limit for your catalytic oxidizer and for the catalytic oxidizers in identical or very similar magnet wire coating machines represented by the tested magnet wire coating machine.

3.13 You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s). The plan must address, at a minimum, the elements specified in sections 3.14 and 3.15, and the elements specified in either (a) section 3.16 or (b) sections 3.17 and 3.18.

3.14 You must conduct a monthly external inspection of each catalytic 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.

3.15 You must conduct an annual internal inspection of each accessible catalyst bed to check for channeling, abrasion, and settling. If problems are found, you must replace the catalyst bed or take corrective action consistent with the manufacturer's recommendations. This provision does not apply to internal catalysts which cannot be accessed without disassembling the magnet wire oven.

3.16 You must take a sample of each catalyst bed and perform an analysis of the catalyst activity (*i.e.*, conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures. This sampling and analysis must be done within the time period shown in Table 1 below of the most recent of the last catalyst activity test or the last catalyst replacement. For example, if the warranty for the catalyst is 3 years and the catalyst was more recently replaced then the sampling and analysis must be done within the earlier of 26,280 operating hours or 5 calendar years of the last catalyst replacement. If the warranty for the catalyst is 3 years and the catalyst was more recently tested then the sampling and analysis must be done within the earlier of 13,140 operating hours or 3 calendar years of the last catalyst activity test. If problems are found during the catalyst activity test, you must replace the catalyst bed or take corrective action consistent with the manufacturer's recommendations.

TABLE 1.—CATALYST MONITORING REQUIREMENTS

If the catalyst was last (more recently) replaced and the warranty period is . . .	Then the time between catalyst replacement and the next catalyst activity test cannot exceed the earlier of . . .	And the catalyst was more recently tested, then the time between catalyst activity tests cannot exceed the earlier of . . .
1 year	8,760 operating hours or 5 calendar years	8,760 operating hours or 3 calendar years.
2 years	15,520 operating hours or 5 calendar years	8,760 operating hours or 3 calendar years.
3 years	26,280 operating hours or 5 calendar years	13,100 operating hours or 3 calendar years.
4 years	35,040 operating hours or 5 calendar years	17,520 operating hours or 3 calendar years.
5 or more years	43,800 operating hours or 5 calendar years	21,900 operating hours or 3 calendar years.

3.17 During the performance test, you must determine the average concentration of organic compounds as carbon in the magnet wire oven exhaust stack gases (C_c in Equation 1 in § 63.3966(d)) and the destruction efficiency of the catalytic oxidizer, and calculate the operating limit for oven exhaust stack gas concentration as follows. You must identify the highest organic HAP content coating used on this magnet wire coating machine or any identical or very similar magnet wire coating machines to which the same destruction efficiency test results will be applied. Calculate the percent emission reduction necessary to meet the magnet wire coating emission limit when using this coating. Calculate the average concentration of organic compounds as carbon in the magnet wire oven exhaust stack gases that would be equivalent to exactly meeting the magnet wire coating emissions limit when using the highest organic HAP content coating. The maximum operating limit for oven exhaust stack gas concentration equals 90 percent of this calculated concentration.

3.18 For each magnet wire coating machine equipped with a catalytic oxidizer you must perform an annual 10 minute test of the oven exhaust stack gases using EPA Method 25A. This test must be performed under steady state operating conditions similar to those at which the last destruction efficiency test for equipment of that type (either the specific magnet wire coating machine or an identical or very similar magnet wire coating machine) was conducted. If the average exhaust stack gas concentration during the annual test of a magnet wire coating machine equipped with a catalytic oxidizer is greater than the operating limit established in section 3.17 then that is a deviation from the operating limit for that catalytic oxidizer. If problems are found during the annual 10-minute test of the oven exhaust stack gases, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations.

3.19 If a catalyst bed is replaced and the replacement catalyst is not of like or better kind and quality as the old catalyst, then you must conduct a new performance test to determine destruction efficiency according to § 63.3966 and establish new operating limits for that catalytic oxidizer unless destruction efficiency test results and operating limits for an identical or very similar unit (including consideration of the replacement catalyst) are available and approved for use for the catalytic oxidizer with the replacement catalyst.

3.20 If a catalyst bed is replaced and the replacement catalyst is of like or better kind and quality as the old catalyst, then a new performance test to determine destruction efficiency is not required and you may continue to use the previously established operating limits for that catalytic oxidizer.

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