NATIONAL ARCHIVES AND RECORDS ADMINISTRATION
1985

Federal Register

Thursday,
July 11, 2002

Part II

Environmental Protection Agency

40 CFR Part 63

National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[FRL–7237–1]

RIN 2060–AG98

National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: This action proposes national emission standards for hazardous air pollutants (NESHAP) for fabric and other textile coating, printing, slashing, dyeing, and finishing operations, pursuant to section 112(d) of the Clean Air Act (CAA). This action also revises the title of the source category. The Printing, Coating and Dyeing of Fabrics source category was included in the initial list of categories of hazardous air pollutants (HAP), published in the **Federal Register** on July 16, 1992. This action changes the title of the source category to Printing, Coating, and Dyeing of Fabrics and Other Textiles, to clarify the applicability of the proposed NESHAP to HAP-emitting operations performed on textile substrates including, but not limited to, fabric.

The EPA has estimated that there are approximately 135 major source facilities in the Printing, Coating, and Dyeing of Fabrics and Other Textiles source category. The principal HAP emitted by these affected sources include toluene, methyl ethyl ketone (MEK), methanol, xylenes, methyl isobutyl ketone (MIBK), methylene chloride, n-hexane, trichloroethylene, and n,n-dimethyl formamide. Secondary HAP emitted include 1,1,1-trichloroethane, naphthalene, ethyl benzene, glycol ethers (ethylene glycol), biphenyl, and styrene.

Exposure to these substances has been demonstrated to cause adverse health effects such as irritation of the eye, lung, and mucous membranes, effects on the central nervous system, and damage to the liver. The EPA has classified two of the HAP as probable or possible human carcinogens. In general, these adverse health effect findings have only been shown with concentrations higher than those typically in the ambient air. The proposed standards would reduce nationwide HAP emissions from major sources by approximately 60 percent. The reduction in HAP emissions would be achieved by requiring all fabric and other textiles coating, printing, slashing, dyeing, and finishing operations at major sources to meet the HAP emission standards reflecting the application of the maximum achievable control technology (MACT). Emission reductions achieved by these standards, when combined with the emission reductions achieved by other similar standards, would protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare, protect the environment, and achieve a primary goal of the CAA.

DATES: *Comments.* Submit comments on or before September 9, 2002.

Public Hearing. If anyone contacts the EPA requesting to speak at a public hearing, they should do so by July 31, 2002. If requested, a public hearing will be held within approximately 30 days following publication of this document in the **Federal Register**.

ADDRESSES: *Comments.* By U.S. Postal Service, send comments (in duplicate if possible) to: Air and Radiation Docket and Information Center (6102), Attention Docket Number A–97–51, U.S. EPA, 1200 Pennsylvania Avenue, NW., Washington, DC 20460. In person or by courier, deliver comments (in duplicate if possible) to: Air and Radiation Docket and Information Center (6102), Attention Docket Number A–97–51, U.S. EPA, 501 M Street, SW., Room M–1500, Washington, DC 20460. The EPA requests a separate copy also be sent to the contact person listed in **FOR FURTHER INFORMATION CONTACT**.

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

Docket. Docket No. A–97–51 contains supporting information used in developing the proposed standards. The docket is located at the U.S. EPA, 401 M Street, SW., Washington, DC 20460 in Room M–1500, Waterside Mall (ground floor), and may be inspected from 8:30 a.m. to 5:30 p.m., Monday through Friday, excluding legal holidays.

FOR FURTHER INFORMATION CONTACT: Mr. Vinson Hellwig, Coatings and Consumer Products Group (C539–03), Emission Standards Division, U.S. EPA, Research Triangle Park, NC 27711; telephone number (919) 541–2317; facsimile number (919) 541–5689; electronic mail (e-mail) address: *hellwig.vinson@epa.gov.*

SUPPLEMENTARY INFORMATION:

Comments. Comments and data may be submitted by e-mail to: *a-and-r-docket@epa.gov.* Electronic comments must be submitted as an ASCII file to avoid the use of special characters and encryption problems and will also be accepted on disks in WordPerfect® file format. All comments and data submitted in electronic form must note the docket number: A–97–51. No confidential business information (CBI) should be submitted by e-mail. Electronic comments may be filed online at many Federal Depository Libraries.

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

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

Docket. The docket is an organized and complete file of all the information considered by EPA in the development of this rulemaking. The docket is a dynamic file because material is added throughout the rulemaking process. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the proposed and promulgated standards and their preambles, the contents of the docket will serve as the record in the case of judicial review. (See section 307(d)(7)(A) of the CAA.) The regulatory text and other materials related to this rulemaking are available for review in the docket or copies may be mailed on request from the Air and Radiation Docket and Information Center by calling (202) 260–7548. A reasonable fee may be charged for copying docket materials.

WorldWide Web (WWW). In addition to being available in the docket, an electronic copy of the proposed rule will also be available on the WWW through the Technology Transfer Network (TTN). Following signature by the EPA Administrator, a copy of the proposed rule will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at *http://www.epa.gov/ttn/oarpg.* The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541–5384.

Regulated Entities. The proposed source category definition includes sources that engage in the coating, printing, slashing, dyeing, or finishing of any fabric or other textile. In general, sources that engage in fabric and other textiles coating, printing, slashing, dyeing, or finishing operations are covered under the North American Industrial Classification System (NAICS) codes listed in the following table. However, sources classified under other NAICS codes may be subject to the proposed standards if they meet the applicability criteria. Not all sources classified under the NAICS codes in the following table will be subject to the proposed standards because some of the classifications cover products outside the scope of the NESHAP for printing, coating and dyeing of fabrics and other textiles.

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

NAICS Code	NAICS product description
31321	Broadwoven Fabric Mills
31322	Narrow Fabric Mills and Schiffli Machine Embroidery
313241	Weft Knit Fabric Mills
313311	Broadwoven Fabric Finishing Mills
313312	Textile and Fabric Finishing (except Broadwoven Fabric) Mills
313320	Fabric Coating Mills
314110	Carpet and Rug Mills
326220	Rubber and Plastics Hoses and Belting and Manufacturing
339991	Gasket, Packing, and Sealing Device Manufacturing

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 operation is regulated by this action, you should examine the applicability criteria in § 63.4281 of the proposed rule. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

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

I. Background

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

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 Printing, Coating, and Dyeing of Fabrics source category was listed on July 16, 1992 (57 FR 31576) under the Surface Coating Processes industry group. As has been noted previously in this preamble, today's action changes the title of the source category to Printing, Coating, and Dyeing of Fabrics and Other Textiles.

Major sources of HAP are those that have the potential to emit greater than 10 tons per year (tpy) of any one HAP or 25 tpy of any combination of HAP.

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

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

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

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

C. What Are the Health Effects Associated With HAP Emissions From Coating, Printing, Slashing, Dyeing, and Finishing Operations?

The HAP emitted from coating, printing, slashing, dyeing, and finishing operations include toluene, MEK, methanol, xylenes, MIBK, methylene chloride, n-hexane, trichloroethylene, and n,n-dimethylformamide. These compounds account for about 81 percent of the nationwide HAP emissions from this source category. The HAP that would be controlled with the proposed rule are associated with a variety of adverse health effects. These adverse health effects include chronic health disorders (*e.g.,* irritation of the eyes, lungs, and mucous membranes, effects on the central nervous system, and damage to the heart and liver) and acute health disorders (*e.g.,* respiratory irritation and central nervous system effects such as drowsiness, headache, and nausea). The EPA has classified two of the HAP (methylene chloride and naphthalene) as probable or possible human carcinogens.

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

II. Summary of the Proposed Rule

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

The proposed rule would apply to you if you own or operate a fabric or other textile coating, printing, slashing, dyeing, or finishing operation or group of such operations that is a major source, or is located at a major source, or is part of a major source of HAP emissions, whether or not you manufacture the substrate. The coating, printing, slashing, dyeing, or finishing operations themselves are not required to be major sources of HAP emissions in order for them to be covered by the proposed rule. As long as some part of the facility where the operations are located (*e.g.,* a process boiler or manufacturing operations associated with production of the final product) causes it to be a major source, the coating, printing, slashing, dyeing, and finishing operations would be subject to the standards.

Any major HAP-emitting facility that performs coating, printing, slashing, dyeing, or finishing of fabric or other textiles is in this source category. As defined in the proposed rule, fabric or other textiles includes, but is not limited to, yarn, fiber, cord, thread, fabric and textile products, tents, roofing, soft baggage, marine fabric, drapery linings, flexible hoses, hot-air balloons, and awnings. The source category includes three subcategories (coating and printing, slashing, and dyeing and finishing) as described in the following paragraphs.

The coating and printing subcategory encompasses coating activities and equipment used to apply semi-liquid coating material to one or both sides of a textile web substrate. Once the coating is dried (and cured, if necessary) it bonds with the substrate to form a continuous solid film for decorative, protective, or functional purposes. Similarly, the coating and printing subcategory includes printing activities and equipment used to apply color and patterns to textile substrates, usually in the form of a paste. After application of the printing material, the substrate is treated with steam, heat, or chemicals to fix the color. If you coat fabric or other textiles and any other substrate on a coating line, then that line would be subject to the proposed rule unless it is specifically exempted in another NESHAP. We currently plan to provide such an exemption in the tire cord production NESHAP for tire cord coating lines that occasionally coat fabric. Another exemption is planned for the paper and other web coating NESHAP for lines that coat medical tape or duct tape.

The slashing subcategory includes the yarn preparation process performed on warp yarn prior to weaving. Slashing is the application of a chemical solution (known as sizing) to a yarn in a water solution followed by squeezing and drying.

The dyeing and finishing subcategory includes the equipment and operations involved in two separate but related processes that are both performed at some sources, while only one or the other is performed at other sources. Dyes and finishes are applied to yarn, fiber, cord, thread, or fabric in aqueous solutions and then dried. Dyeing is the application of color to the whole body of a textile substrate. Finishing is a process performed after dyeing that improves the appearance and/or usefulness of a textile substrate.

You would not be subject to the proposed rule if your coating, printing, slashing, dyeing, or finishing operation 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.

Exclusions from the source category include coating, printing, slashing, dyeing or finishing at sources using only coating, printing, slashing, dyeing, finishing, thinning, and cleaning materials that contain no organic HAP; coating, printing, slashing, dyeing, or finishing that occurs at research or laboratory facilities or that is part of janitorial, building, and facility maintenance operations; and coating, printing, slashing, dyeing, or finishing used by an affected source and not for commerce, unless organic HAP emissions from the facility that performs coating, printing, slashing, dyeing, or finishing operations are as high as the specified major source HAP emissions.

B. What Is the Relationship to Other Rules?

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

New Source Performance Standards—40 CFR part 60, subpart VVV. The new source performance standards (NSPS) for polymeric coating of supporting substrates apply to affected facilities that apply elastomers, polymers, or prepolymers to a supporting web other than paper, plastic film, metallic foil, or metal coil and that began construction, reconstruction, or modification after April 30, 1987. The pollutants regulated are volatile organic compounds (VOC). The affected facility is each coating operation and any onsite coating mix preparation equipment used to prepare coatings for the polymeric coating of the affected substrate. Emissions of VOC from the coating operation must be reduced by at least 90 percent or a total enclosure must be installed around the coating operation vented to an add-on control device that is at least 95 percent efficient. Depending on criteria in the NSPS, VOC emissions from onsite coating mix preparation equipment must be vented to a 95 percent efficient add-on control device or each piece of mix preparation equipment must be covered.

The proposed requirements for coating operations differ from the NSPS in three ways. First, the ‘‘affected source’’ for the proposed rule is defined broadly as the collection of all of the coating and printing operations and associated processes at the facility, whereas the ‘‘affected facility’’ for the NSPS is defined narrowly as each individual coating operation. The proposed NESHAP's broader definition of an affected source allows averaging across coating and printing lines for compliance purposes. Second, the proposed rule regulates organic HAP. While most organic HAP emitted from coating and printing operations are VOC, some VOC are not listed as HAP, and, therefore, the NSPS regulates a broader range of pollutants than the proposed NESHAP. Third, the HAP emission limitations in the proposed rule are in terms of an overall control efficiency (OCE) with an alternative weight fraction of solids applied emission rate limit based on the amount of coating solids used at the affected source. The VOC limitations in the NSPS are emission reduction standards; there is not an emission rate option based on the amount of coating solids used. Because of the differences between the two rules, compliance with either rule cannot be deemed compliance with the other. A coating or printing operation that meets the applicability requirements of both rules must comply with both. Overlapping reporting, recordkeeping, and monitoring requirements may be resolved through your title V permit.

Future national emission standards for the surface coating of paper and other web products. The paper and other web coating NESHAP were proposed September 13, 2000 (65 FR 55332). If you operate a coating line(s) that applies coatings both to paper and other web and to fabric and other textile substrates on the same line, then the coating line(s) is subject to the proposed printing, coating, and dyeing of fabrics and other textiles NESHAP. The only exceptions are where the paper and other web substrate being coated is medical tape or duct tape or where fabric is being laminated to a paper or other web substrate, and these exceptions will be specified in the paper and other web NESHAP.

Future national emission standards for tire manufacturing. The EPA has identified affected sources in the tire manufacturing source category that coat tire cord and that also sometimes apply coatings to textile cord used in the production of belts and hoses. If the source is subject to the tire manufacturing NESHAP, it is not subject to the proposed printing, coating, and dyeing of fabrics and other textiles NESHAP.

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

HAP emission sources. Coating and printing material application and curing are the largest contributors of HAP emissions at coating and printing affected sources. For example, based on the responses to a survey of the coating industry, the portion of total affected source HAP emissions attributed to coating application and curing is estimated to be approximately 95 percent. Other operations and activities that may create HAP emissions associated with coating/printing include storage tanks, substrate preparation, coating and printing material mixing/thinning operations, parts and equipment cleaning, and waste and wastewater operations.

The primary source of HAP emissions from slashing is methanol from polyvinyl alcohol (PVA) size, typically applied to synthetics (although it adheres to and is used for natural fibers as well). The methanol is present in the PVA size as a contaminant and is not needed for the slashing process. The methanol emissions can arise either from the size cooking operation and/or from the application or slashing process—the distribution is unclear, although it will depend upon the temperature at which the size is cooked, the cooking time, and how often mixing containers (cookers) are opened.

The sources of HAP emissions from dyeing are the HAP constituents that are contained in dyestuffs and auxiliary chemicals as purchased. The HAP constituents are needed to impart certain desirable characteristics to the dyed substrate (e.g., certain colors can only be attained through the use of HAP-containing dyestuffs or auxiliaries.) No HAP are known to be added by the users. The fraction of HAP contained in dye materials that is emitted to the atmosphere is generally estimated to range from zero to 10 percent, although a few sources report from 19 percent to as much as 100 percent emitted. The fraction of HAP in dye materials emitted to the atmosphere depends on the characteristics of the specific HAP constituents and the pressures and temperatures that the HAP are exposed to in the dyeing process operations. Most HAP constituents are believed to be rinsed from the substrate before the substrate is dried, because drying a substrate with unattached dye would adversely affect the quality of the dyed product.

The sources of HAP emissions from finishing are the HAP constituents that are contained in finishing materials as purchased, *i.e.,* as delivered to the affected source, before alteration. As is the case with dyeing, the HAP constituents are needed to impart certain desirable characteristics to the finished substrate (e.g., a resin finish containing HAP might be applied to a cotton/polyester blend for durable press and dimensional stability). No HAP are known to be added by the users. In finishing, unlike in dyeing, the fraction of HAP contained in finishes that is emitted to the atmosphere is generally assumed to be 100 percent with the exception of HAP that cross-link to the fiber, such as formaldehyde. This is because finished textiles are generally dried and cured at relatively high temperatures over 300 degrees Fahrenheit.

Organic HAP. Available emission data collected during the development of the proposed NESHAP show that the primary organic HAP emitted from coating and printing include toluene, MEK, hexane, and n,n-dimethylformamide. These compounds account for approximately 92 percent of this subcategory's nationwide organic HAP emissions. Other significant organic HAP identified include MIBK, hexane, and methylene chloride.

Available emission data collected during the development of the proposed NESHAP show that the organic HAP emitted from slashing is methanol. Methanol accounts for almost 100 percent of this subcategory's nationwide organic HAP emissions.

Based on emission data reported in survey responses collected during the development of the proposed NESHAP, methanol, glycol ether, and ethylene glycol are the primary HAP emitted from textile dyeing and finishing operations. These HAP account for approximately 82 percent of this subcategory's nationwide HAP emissions. Other significant organic HAP identified include formaldehyde, toluene and styrene.

Inorganic HAP. Based on information reported in survey responses during the development of the proposed NESHAP, inorganic HAP, including chromium, cobalt, hydrogen chloride, lead, manganese compounds and nickel, are components of some coatings, dyes, and finishes used by this source category. Inorganic HAP are not likely to be emitted because of the application techniques used.

D. What Is the Affected Source?

We define an affected source as a stationary source, a group of stationary sources, or part of a stationary source to which a specific emission standard applies. The proposed standards define the affected source for each subcategory as the collection of all equipment associated with the coating and printing, the slashing, or the dyeing and finishing performed on a textile substrate. For the purpose of defining the affected source, the textile substrate includes staple fibers and filaments suitable for conversion to or use as yarns, or for the preparation of woven, knit, or nonwoven fabrics; yarns made from natural or manufactured fibers; fabrics and other manufactured products made from staple fibers and filaments and from yarn; and garments and other articles fabricated from fibers, yarns, or fabrics. Also for each subcategory, the specific regulated materials are defined. Regulated materials are the HAP-containing materials that are the source of HAP emissions limited by the requirements of the proposed NESHAP.

The affected source for the coating and printing subcategory includes: all web coating and printing equipment used to apply cleaning materials to a substrate to prepare it for coating or printing material application, to apply coating or printing materials to a substrate and to dry or cure the coating or printing materials after application by exposure to heat or radiation (coating or printing material drying or curing), or to clean coating/printing operation equipment; all storage containers and mixing vessels in which regulated materials are stored or mixed; all manual and automated equipment and containers used for conveying regulated materials; all storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating or printing operation; and all manual and automated equipment, structures, and devices used to convey, treat, or dispose of wastewater streams or residuals. Coating or printing material drying or curing at ambient conditions is not drying or curing for the purpose of the proposed standards. The regulated materials for the coating and printing subcategory are the coating, printing, thinning and cleaning materials used in the affected source.

The affected source for the slashing subcategory includes: all slashing equipment used to apply and dry size on warp yarn; all storage containers and mixing vessels in which regulated materials are stored or mixed; all manual and automated equipment and containers used for conveying regulated materials; all storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a slashing operation; and all manual and automated equipment, structures, and devices used to convey, treat, or dispose of wastewater streams or residuals. The regulated materials for the slashing subcategory are the slashing materials used in the affected source.

The affected source for the dyeing and finishing subcategory includes: all dyeing and finishing equipment used to apply dyeing or finishing materials, to fix dyeing materials to the substrate, to rinse the textile substrate, to dry or cure the dyeing or finishing materials, or to clean dyeing/finishing operation equipment; all storage containers and mixing vessels in which regulated materials are stored or mixed; all manual and automated equipment and containers used for conveying regulated materials; all storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a dyeing or finishing operation; and all manual and automated equipment, structures, and devices used to convey, treat, or dispose of wastewater streams or residuals. The regulated materials for the dyeing and finishing subcategory are the dyeing, finishing, and cleaning materials used in the affected source.

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

We are proposing standards that would limit organic HAP emissions from coating, printing, slashing, dyeing, and finishing operations. The proposed standards include emission limits, operating limits, and work practice standards. Emission limits are being proposed for the coating and printing, slashing, and dyeing and finishing subcategories. Operating limits and work practice standards are being proposed for the coating and printing subcategory.

Emission limits. In the coating and printing subcategory, we are proposing to limit organic HAP emissions to the atmosphere from each new and reconstructed affected source to one of the following three specified levels: (1) At least a 98 percent organic HAP OCE (OCE limit); (2) no more than 0.08 kilograms (kg) organic HAP/kg of coating solids used (0.08 pound (lb) organic HAP/lb of coating solids used) during each monthly compliance period (emission rate limit); or (3) if you are using an oxidizer to control organic HAP emissions, operate the oxidizer such that an outlet organic HAP concentration of no greater than 20 parts per million by volume (ppmv) on a dry basis is achieved and the efficiency of the capture system is 100 percent (outlet concentration limit). The proposed HAP emission limits for each existing affected source are: (1) To achieve at least a 97 percent OCE limit; (2) an emission rate limit of no more than 0.12 kg organic HAP/kg of coating solids used (0.12 lb organic HAP/lb of coating solids used) in each monthly compliance period; or (3) if you are using an oxidizer to control organic HAP emissions, operate the oxidizer to achieve the outlet concentration limit of no greater than 20 ppmv on a dry basis and the efficiency of the capture system is 100 percent.

You may choose from several compliance options in the proposed rule to achieve the coating and printing emission limits. You could comply through a pollution prevention approach by applying regulated materials that meet the emission rate limits, either individually (compliant material option) or collectively (emission rate without add-on controls option), during each monthly compliance period. Second, you could use a capture system and add-on control device to meet either the applicable organic HAP OCE limit or emission rate limit. Third, you could use a 100 percent efficient capture system and an oxidizer that reduces organic HAP emissions to no more than 20 ppmv.

In the slashing subcategory, we are proposing to require each new, reconstructed and existing affected source to emit no organic HAP. This is not an absolute zero HAP limit since the compliance procedures specify that to determine organic HAP emissions, you would count only organic HAP present in the materials you use at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1 percent or more for other organic HAP compounds. To comply with the slashing organic HAP emission limits, you must apply only materials that individually meet the standard during each monthly compliance period.

In the dyeing and finishing subcategory, we are proposing to limit organic HAP emissions from each new, reconstructed and existing affected source that conducts dyeing operations only or both dyeing and finishing operations to no more than 0.016 kg organic HAP per kg of dyeing material used (0.016 lb organic HAP per lb of dyeing material used) for each monthly compliance period. You could comply with the dyeing and finishing organic HAP emission rate by applying materials that meet the emission rate, either individually or collectively, during each monthly compliance period. Each new, reconstructed and existing affected source that conducts only finishing operations is required to emit no organic HAP. This is not an absolute zero HAP limit since the compliance procedures specify that to determine organic HAP emissions, you would count only organic HAP that are present in the materials you use 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 percent or more for other organic HAP compounds.

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

For thermal oxidizers, you would monitor the combustion temperature. For catalytic oxidizers, you would either monitor the temperature immediately before and after the catalyst bed, or you would monitor the temperature before the catalyst bed and prepare and implement an inspection and maintenance plan that includes periodic catalyst activity checks. For carbon adsorbers for which you do not conduct a liquid-liquid material balance, you would monitor the carbon bed temperature and the amount of steam or nitrogen used to desorb the bed. For condensers, you would monitor the outlet gas temperature from the condenser. For concentrators, you would monitor the temperature in the desorption gas stream and the pressure drop across the zeolite wheel or rotary carbon bed.

The site-specific parameter limits that you establish must reflect operation of the capture system and add-on 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 add-on control device for compliance, you would be required to develop and implement a work practice plan to minimize organic HAP emissions from mixing operations, storage tanks and other containers, and handling operations for coating, printing, thinning, cleaning, and waste materials.

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

General Provisions. The General Provisions (40 CFR part 63, subpart A) would also apply to you as indicated in the proposed rule. The General Provisions codify certain procedures and criteria for all 40 CFR part 63 NESHAP. The General Provisions contain administrative procedures, preconstruction review procedures for new sources, and procedures for conducting compliance-related activities such as notifications, reporting and recordkeeping, performance testing, and monitoring. The proposed rule refers to individual sections of the General Provisions to emphasize key sections that are relevant. However, unless specifically overridden in the proposed rule, all of the applicable General Provisions requirements would apply to you.

F. What Are the Testing and Initial Compliance Requirements?

Compliance dates. Existing affected sources would have to be in compliance with the final standards no later than [DATE 3 YEARS AFTER PUBLICATION OF THE FINAL RULE IN THE **FEDERAL REGISTER**]. New and reconstructed affected sources would have to be in compliance upon startup of the affected source or by the [DATE OF PUBLICATION OF THE FINAL RULE IN THE **FEDERAL REGISTER**], whichever is later. The effective date is the date on which the final rule is published in the **Federal Register**.

The proposed initial compliance period begins on the compliance date and ends on the last day of the first full month following the compliance date; except for new and reconstructed sources required to conduct performance tests, the initial compliance period ends on the last day of the first full month following the performance test if the performance test is conducted later than the compliance date (the proposed rule allows the test to be conducted up to 180 days later).

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

Emission limits. With the exception of the slashing emission limit, there are several proposed options for complying with the proposed emission limits, and the testing and initial compliance requirements vary accordingly. You would be able to use different compliance options for different coating, printing, dyeing, and finishing operations in the affected source for each subcategory and also for the same operation at different times.

Compliance based on materials used in the affected source. If you demonstrate compliance with the proposed coating and printing emission limits based on the materials used, you would determine the mass of organic HAP and the mass fraction of solids in all materials used during the month of the initial compliance period. You would be required to demonstrate either that the organic HAP content of each coating and printing material meets the applicable emission limit and that you use no organic HAP-containing thinning or cleaning materials (compliant material option); or that the total mass of organic HAP in all coating, printing, thinning, and cleaning materials used divided by the total mass of solids in coating and printing materials used meets the applicable emission limit (emission rate without add-on controls option).

The compliant material option is a pollution prevention option that allows you to easily demonstrate compliance by using low-HAP or non-HAP coating and printing materials. If you use coating and printing materials that, based on their organic HAP content, individually meet the kg (lb) organic HAP emitted per kg (lb) 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 can demonstrate compliance by using readily available purchase records containing manufacturer's formulation data to determine the organic HAP content of each coating, printing, or other material and the amount of each material used. You would not need to perform any detailed emission rate calculations.

To demonstrate compliance with the compliant material option, you would demonstrate that the organic HAP content of each coating and printing material meets the applicable emission limit in Table 1 to the proposed subpart, and that you used no organic HAP-containing thinning or cleaning materials. For example, if you are using the compliant materials option for your existing source, you would demonstrate that: (1) Each coating and printing material used has an organic HAP content no greater than 0.12 kg (0.12 lb) organic HAP per kg (lb) solids used, (2) and that you used no organic HAP-containing thinning or cleaning materials. Note that ''no organic HAP'' is not intended to mean absolute zero. Materials that contain ''no organic HAP'' should be interpreted to mean materials that contain organic HAP levels below the levels specified in § 63.4341(e) of the proposed rule, which are typical reporting levels. 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 fraction of organic HAP in coating, printing, thinning, and cleaning materials and the mass fraction of solids in coating and printing materials, you could rely on manufacturer's formulation data. You would not be 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 would prevail for compliance and enforcement purposes.

- For mass fraction of organic HAP, you would use Method 311 of 40 CFR part 63, appendix A;
- The proposed rule would allow you to use nonaqueous volatile matter as a surrogate for organic HAP, which would include all organic HAP plus all other organic compounds, and excluding water. If you choose this option, you would use Method 24 of 40 CFR part 60, appendix A; and
- For mass fraction of solids, you would use Method 24 of 40 CFR part 60, appendix A.

The emission rate without add-on controls option is a pollution prevention option where you can demonstrate compliance based on the organic HAP contained in the mix of coating, printing, thinning, and cleaning materials you use. This option allows you the flexibility to use some individual coating or printing materials that do not individually meet the emission limit if you use other low-HAP or non-HAP coating or printing materials such that overall emissions from the affected source during the compliance period meet the emission limit.

To demonstrate initial compliance with the emission rate limit without add-on controls option, you would be required to:

- Determine the quantity of each coating, printing, thinning, and cleaning material you used.
- Calculate the mass of organic HAP in each coating, printing, thinning, and cleaning material using the same types of data and methods previously described for the compliant material option.
- Determine the mass fraction of solids for each coating and printing material you used using the same types of data or methods described for the compliant material option.
- Calculate the total mass of organic HAP in all materials used and total mass of solids for all coating and printing materials used. You may subtract from the total mass of organic HAP the amount contained in waste materials you send to a hazardous waste treatment, storage, and disposal facility regulated under 40 CFR part 262, 264, 265, or 266.
- Calculate the ratio of the total mass of organic HAP to the total mass of solids for the materials used.
- 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/printing operation or group of operations rather than for an entire affected source, you would calculate the organic HAP emission rate using just the materials used in that operation or group. You would need to separately demonstrate compliance for all other operations in the affected source.

To demonstrate compliance with the proposed slashing emission limits, you must use the compliant material option and demonstrate that each slashing material used during the initial compliance period contains no organic HAP. As was noted regarding thinning or cleaning materials used in coating/printing operations, ''no organic HAP'' is not intended to mean absolute zero. Materials that contain ''no organic HAP'' should be interpreted to mean materials that contain organic HAP levels below the levels specified in § 63.4341(e) of the proposed rule, which are typical reporting levels.

To demonstrate compliance with the proposed dyeing and finishing emission limits, you would be required to demonstrate either that the organic HAP content of each dyeing, finishing and cleaning material meets the applicable emission limit (compliant material option) or that the total mass of organic HAP in all dyeing, finishing and cleaning materials used divided by the total mass of dyeing, finishing and cleaning materials used meets the applicable emission limit (emission rate without add-on controls option).

As previously described for coating/printing operations, the compliant material option is a pollution prevention option that allows you to easily demonstrate compliance by using low-HAP or non-HAP dyeing, finishing and cleaning materials. To demonstrate compliance with the compliant material option, you would demonstrate that the organic HAP content of each dyeing, finishing, and cleaning material meets the applicable emission limit in Table 1 to the proposed subpart. To determine the mass of organic HAP in dyeing, finishing and cleaning materials, you may rely on manufacturer's formulation data. You would not be 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 would prevail for compliance and enforcement purposes.

- For mass fraction of organic HAP, you would use Method 311 of 40 CFR part 63, appendix A;
- The proposed rule would allow you to use nonaqueous volatile matter as a surrogate for organic HAP, which would include all organic HAP plus all other organic compounds, and excluding water. If you choose this option, you would use Method 24 of 40 CFR part 60, appendix A.

Again as previously described for coating/printing operations, the emission rate without add-on controls option is a pollution prevention option where you can demonstrate compliance based on the organic HAP contained in the mix of dyeing, finishing, and cleaning materials you use. This option allows you more flexibility that the compliant material option, but requires the calculation of the emission rate each month. To demonstrate initial compliance with the emission rate without add-on controls option, you would be required to:

- Determine the mass of each dyeing, finishing and cleaning material you used.
- Calculate the mass of organic HAP in each dyeing, finishing and cleaning material.
- Calculate the total mass of organic HAP in all materials and the total mass of all materials used for the compliance period. You may subtract from the total mass of organic HAP the amount contained in waste materials you send to a hazardous waste treatment, storage, and disposal facility regulated under 40 CFR part 262, 264, 265, or 266.
- Calculate the ratio of the total mass of organic HAP in the materials used to the total mass of materials used.
- 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 dyeing/finishing operation or group of operations rather than for an entire affected source, you would calculate the organic HAP emission rate using just the materials used in that operation or group. You would need to separately demonstrate compliance for all other operations in the affected source.

Compliance based on using a capture system and add-on control device for coating and printing operations. If you use a capture system and add-on control device on a coating/printing operation, other than a solvent recovery system for which you conduct a liquid-liquid material balance, you would determine the capture and control efficiencies of the equipment or the oxidizer outlet organic HAP concentration. For the organic HAP emission rate limit, you also would determine the mass fraction of organic HAP and the mass fraction of solids in all materials used during the month of the initial compliance period. You would be required to demonstrate either that the organic HAP OCE is greater than or equal to the applicable organic HAP OCE limit, that the oxidizer outlet organic HAP concentration is no greater than 20 ppmv on a dry basis and the efficiency of the capture system is 100 percent, or that the capture and control system reduces organic HAP emissions to a level no greater than the applicable emission rate limit.

If you use a solvent recovery system for which you conduct a liquid-liquid material balance, you would be required to demonstrate either that the organic HAP OCE determined by material balance during the month of the initial compliance period is greater than or equal to the applicable organic HAP OCE limit or that the solvent recovery system reduces organic HAP emissions to a level no greater than the applicable emission rate limit.

The proposed testing and initial compliance requirements associated with determining the OCE of the capture system and add-on control device are summarized in the following paragraphs.

If you use a capture system and add-on control device, other than a solvent recovery system for which you conduct material balances, you would be required to conduct an initial performance test to determine the capture and control efficiencies of the equipment (or the capture efficiency of the capture system and the oxidizer outlet organic HAP concentration) and to establish operating limits to be achieved on a continuous basis. The performance test would have to be completed no later than the compliance date for existing sources and 180 days after the compliance date for new and reconstructed sources. If you are demonstrating compliance with the applicable emission rate limit with add-on controls, you would need to schedule the performance test in time to obtain the results for use in calculating your emission rate for the month of the initial compliance period.

You would determine both the efficiency of the capture system and either the organic HAP emission reduction efficiency of the add-on control device or the outlet organic HAP concentration of the oxidizer. To determine the capture efficiency, you would either verify the presence of a PTE using EPA Method 204 of 40 CFR part 51, appendix M (and all materials must be applied and dried or cured within the enclosure); or use one of three protocols in proposed § 63.4365 to measure capture efficiency. If you have a PTE and all regulated materials are applied and dried or cured within the enclosure and you route all exhaust gases from the enclosure to an add-on control device, then you would assume 100 percent capture. To demonstrate compliance with the oxidizer outlet organic HAP concentration limit, 100 percent capture is required.

To determine the organic HAP emission reduction efficiency of the add-on control device, you would conduct measurements of the inlet and outlet gas streams. Only the outlet gas stream would be measured to determine outlet concentration. The performance test would consist of three runs, each run lasting 1 hour, using the following EPA Methods in 40 CFR part 60, appendix A:

- Method 1 or 1A for selection of the sampling sites.
- Method 2, 2A, 2C, 2D, 2F, or 2G to determine the gas volumetric flow rate.
- Method 3, 3A, or 3B for gas analysis to determine dry molecular weight. You may also use as an alternative to Method 3B, the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas in ANSI/ASME PTC 19.10–1981.
- Method 4 to determine stack moisture.
- Method 25 or 25A to determine organic volatile matter concentration. You would use Method 25A to demonstrate compliance with the oxidizer outlet organic HAP

concentration limit because the limit is less than 50 ppmw. Alternatively, any other test method or data that have been validated according to the applicable procedures in Method 301 of 40 CFR part 63, appendix A, and approved by the Administrator, could be used.

If you use a solvent recovery system, you could determine the OCE using a liquid-liquid material balance instead of conducting an initial performance test. If you use the material balance alternative, you would be required to measure the amount of all materials used during the month of the initial compliance period and determine the total volatile matter contained in these materials. You would also measure the amount of volatile matter recovered by the solvent recovery system during the compliance period. Then you would compare the amount recovered to the amount used to determine the OCE. You would record the calculations and results and include them in your Notification of Compliance Status.

Additional proposed testing and initial compliance requirements associated with demonstrating compliance using the emission rate with add-on controls option are as follows:

- Determine the mass fraction of organic HAP in each coating, printing, thinning, and cleaning material used and the mass fraction of solids in coating and printing materials used during the month of the initial compliance period, as described previously in ‘‘Compliance based on materials used in the affected source.’’
- Calculate the total mass of organic HAP in all materials and total mass of solids for all coating and printing materials. You may subtract from the total mass of organic HAP the amount contained in waste materials you send to a hazardous waste treatment, storage, and disposal facility regulated under 40 CFR part 262, 264, 265, or 266.
- Calculate the organic HAP emission reductions from the controlled coating or printing operations using the capture and control efficiencies determined during the performance test or the materials balance for the month and the total mass of organic HAP in materials used in controlled coating and printing operations.
- Calculate the ratio of the total mass of HAP emissions to the total mass of solids for the materials used during the month of 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.

Operating limits. As mentioned above, you would establish operating limits as part of the initial performance test of a capture system and add-on 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 add-on control devices during the performance test, conducted under representative conditions, that demonstrated compliance with the emission limits.

The proposed rule specifies the parameters to monitor for the types of emission control systems commonly used in the industry. You would be required to install, calibrate, maintain, and continuously operate all monitoring equipment according to the manufacturer’s specifications and ensure that the continuous parameter monitoring systems (CPMS) meet the requirements in § 63.4374 of the proposed rule. If you use add-on control devices other than those identified in the proposed rule, you would submit the operating parameters to be monitored to the Administrator for approval. The authority to approve the parameters to be monitored is retained by EPA and is not delegated to States.

If you use a thermal or catalytic oxidizer, you would continuously monitor the appropriate temperature and record it at least every 15 minutes. For thermal oxidizers, the temperature monitor is placed in the firebox or in the duct immediately downstream of the firebox before any substantial heat exchange occurs. The operating limit would be the average temperature measured during the performance test, and for each consecutive 3-hour period the average temperature would have to be at or above this limit. For catalytic oxidizers, temperature monitors are placed immediately before and after the catalyst bed. The operating limits would be the average temperature just before the catalyst bed and the average temperature difference across the catalyst bed during the performance test. For each 3-hour period, the average temperature and the average temperature difference would have to be at or above these limits. Alternatively, you would be allowed to meet only the temperature limit before the catalyst bed if you develop and implement an inspection and maintenance plan that includes periodic catalyst activity checks.

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

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

If you use a concentrator, you would monitor the desorption concentrate stream gas temperature and the pressure drop of the dilute stream across the concentrator. These values would be recorded at least once every 15 minutes. The operating limits would be the average temperature (to be met as a minimum) and the average pressure drop (not to be exceeded) measured during the performance test.

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

Work practices. If you use a capture system and add-on control device for compliance, you would be required to develop and implement on an ongoing basis a work practice plan for minimizing organic HAP emissions to the atmosphere from storage, mixing, material handling, and waste handling operations. This plan would include a description of all steps taken to minimize emissions from these sources (e.g., using closed storage containers, practices to minimize emissions during filling and transfer of contents from containers, using spill minimization techniques, placing solvent-laden cloths in closed containers immediately after use, etc.). You would have to make the plan available for inspection if the Administrator requests to see it.

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

G. What Are the Continuous Compliance Provisions?

Emission limits. If you demonstrate compliance with the proposed emission limits for slashing based on the materials used (compliant material option), you would demonstrate continuous compliance if, for each monthly compliance period, the organic HAP content of each slashing material used meets the emission limits. You would use manufacturer's data to demonstrate compliance each month as you did for the initial compliance period.

If you demonstrate compliance with the proposed emission limits for coating and printing based on the materials used, you would demonstrate continuous compliance if, for each monthly compliance period, either you use only coating and printing materials that meet the applicable emission limit and only non-HAP thinning and cleaning materials (compliant material option); or that the ratio of total mass of organic HAP to total mass of solids in coating and printing materials used is less than or equal to the emission limits (emission rate without add-on controls option). You would follow the same procedures for calculating the organic HAP to coating and printing solids ratio that you used for the initial compliance period.

If you demonstrate compliance with the proposed emission limits for dyeing and finishing based on the materials used, you would demonstrate continuous compliance if, for each monthly compliance period, either the organic HAP content of each dyeing, finishing and cleaning material meets the applicable emission limit (compliant material option) or the total mass of organic HAP in all dyeing, finishing and cleaning materials used divided by the total mass of dyeing, finishing and cleaning materials used meets the applicable emission limit (emission rate without add-on controls option). You would follow the same procedures for determining the mass of organic HAP in all materials used during the month that you used for the initial compliance period.

For each coating or printing operation on which you use a capture system and add-on control device, other than solvent recovery for which you conduct a liquid-liquid material balance, the continuous parameter monitoring results for each month would affect your compliance determination. If the monitoring results indicate no deviations from the operating limits and there were no bypasses of the add-on control device, you would assume the capture system and add-on control device are achieving the same emission reduction as they did during the performance test in which the operating limits were established. If you are demonstrating compliance with either the organic HAP OCE option or the emission rate with add-on controls option, you would then apply the OCE to the total mass of organic HAP in materials used in controlled coating or printing operations to determine the monthly mass of organic HAP emissions from those operations. If there were any deviations from the operating limits during the month or any bypasses of the add-on control device, you would account for them in the calculation of the applicable emission rate by assuming the capture system and add-on control device were achieving zero emission reduction during the periods of deviation.

For each coating and printing operation on which you use a solvent recovery system and conduct a liquid-liquid material balance each month, you would use the liquid-liquid material balance to determine the emission rate. You would be required to measure the amount of all materials used during each month and determine the volatile matter content of these materials. You would also measure the amount of volatile matter recovered by the solvent recovery system during the month and calculate the weight percent of organic HAP used that was emitted to determine compliance with the organic HAP OCE option. If you are complying with the emission rate with add-on controls option, you would apply the OCE to the total mass of organic HAP in the materials used to determine total organic HAP emissions as input to the compliance demonstration.

Operating limits. If you use an emission capture system and add-on control device, the proposed rule would require you to achieve on a continuous basis the operating limits you establish during the performance test. If the continuous monitoring shows that the capture system and add-on 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 add-on control device with bypass lines that could allow emissions to bypass the add-on control device, you would have to demonstrate that organic HAP emissions collected by the capture system are routed to the add-on control device by monitoring for potential bypass of the add-on control device. You may choose from the following four monitoring procedures:

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

A deviation would occur for any period of time the bypass monitoring procedures indicate that emissions are not routed to the add-on control device.

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

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

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

You would be required to comply with the applicable requirements in the NESHAP General Provisions, subpart A of 40 CFR part 63, as described in the proposed rule. The General Provisions notification requirements include: initial notifications, notification of performance test if you are complying using a capture system and add-on 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 would be required to send a notification to the EPA Regional Office in the region where your affected source is located and to your State agency no later than [DATE 1 YEAR FROM DATE OF PUBLICATION OF THE FINAL RULE IN THE **FEDERAL REGISTER**]. For new and reconstructed sources, you would send the notification within 120 days after the date of initial startup or [DATE 120 DAYS FROM DATE OF PUBLICATION OF THE FINAL RULE IN THE **FEDERAL REGISTER**], whichever is later. The report notifies us and your State agency that you have an existing affected source that is subject to the proposed standards, or that you have constructed a new affected source. Thus, it allows you and the permitting authority to plan for compliance activities. You would also need to send a notification of planned construction or reconstruction of a source that would be subject to the proposed rule and apply for approval to construct or reconstruct.

Notification of performance test. If you demonstrate compliance by using a capture system and add-on control device for which you do not conduct a liquid-liquid material balance, you would conduct a performance test. The performance test would be required no later than the compliance date for an existing affected source. For a new or reconstructed affected source, the performance test would be required no later than 180 days after initial startup or [180 DAYS FROM DATE OF PUBLICATION OF THE FINAL RULE IN THE **Federal Register**], whichever is later. You must notify us (or the delegated State or local agency) at least 60 calendar days before the performance test is scheduled to begin and submit a report of the performance test results no later than 60 days after the test.

Notification of compliance status. You would send us a Notification of Compliance Status within 30 days after the end of the initial compliance period. In the notification, you would certify whether each affected source has complied with the proposed standards, identify the option(s) you used to demonstrate initial compliance, summarize the data and calculations supporting the compliance demonstration, and 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 add-on control device for which you conduct performance tests, you must provide the results of the tests. Your notification would also include the measured range of each monitored parameter, the operating limits established during the performance test, and information showing whether the source has complied with its operating limits during the initial compliance period.

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

You would need to keep all documentation supporting initial notifications and notifications of compliance status.

If your affected source is complying with the slashing emission limits, you would need to keep records of the organic HAP content of each slashing material as purchased.

Depending on the compliance option that you choose for your affected source complying with the dyeing and finishing or coating and printing emission limits, you would need to keep records of the following:

- Organic HAP content, volatile matter content, coating and printing materials solids content, and quantity of the dyeing, finishing, coating, printing, thinning, and cleaning materials used during each compliance period.
- For the emission rate (with or without add-on controls) compliance options, calculations of your emission rate for each compliance period.

If your affected source is in the coating and printing subcategory and you demonstrate compliance by using a capture system and add-on control device, you would also need to keep records of the following:

- All required measurements, calculations, and supporting documentation needed to demonstrate compliance with the standards.
- All results of performance tests and parameter monitoring.
- All information necessary to demonstrate conformance with 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 add-on 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 proposed rule would require you to collect and keep records according to certain minimum data requirements for the CPMS. Failure to collect and keep the specified minimum data would be a deviation that is separate from any emission limits, operating limits, or work practice standards.

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

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

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

- Report each deviation from the emission limit.
- Report each deviation from the work practice standards if you use an emission capture system and add-on control device.
- If you use an emission capture system and add-on 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 add-on control device to the atmosphere.
- Report other specific information on the periods of time the deviations occurred.

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

Electronic reporting option. Comments are invited on the option of voluntary electronic reporting for all reporting requirements in the proposed rule. The option would allow the use of the Internet to meet the reporting requirements of the proposed rule. You would be allowed to choose the option to submit all reports electronically in lieu of filing written reports. The electronic records submittals would need to include all the information that otherwise would be submitted in written reports. The electronic submittals would be via electronic data interchange and would use Data Exchange Templates (DET). The DET or electronic forms will be used to ''tag'' data elements, which will allow reporting of the information to EPA. You would submit the electronic forms through EPA's Central Data Exchange (CDX). We would supply the required data elements, and you would be responsible for submitting the data appropriately ''tagged.'' If the rule were delegated to State, local or tribal agencies for implementation and enforcement, EPA would coordinate with the delegated agencies to provide them with either the electronic information or a hard copy of the required report.

Under this proposed electronic reporting option, it would be necessary to establish: (1) That an electronic document was sent (or not sent); (2) when the document was sent; (3) by whom the document was sent, and including both the individual who sent it and the identity of the entity the individual is authorized to represent; (4) when the document was received; (5) that the document was not altered from the time it was sent to the time it was received; and (6) the contents of the document sent.

Specifically, we request comment on the concept of electronic reporting, advantages to the regulated community by reducing reporting burdens; cost or cost savings; advantages or disadvantages to State/local/tribal agencies; and difficulties to be overcome in the implementation of electronic reporting.

III. Rationale for Selecting the Proposed Standards

A. How did We Select The Source Category and Subcategories?

Printing, coating, and dyeing of fabrics (changed by today's action to printing, coating, and dyeing of fabrics and other textiles) is a source category that is on the list of source categories to be regulated because it contains major sources which emit or have the potential to emit at least 10 tons of any one HAP or at least 25 tons of any combination of HAP annually. The proposed rule would control HAP emissions from both new and existing major sources. Area sources are not being regulated under the proposed rule.

Printing, coating, and dyeing of fabrics as described in the initial listing includes any affected source engaged in those activities. We also have found that slashing and finishing operations in printing, coating and dyeing sources have the potential to emit major source levels of organic HAP. We use the product lists contained in the NAICS code descriptions to describe the vast array of products composed of or containing fabric, textiles, yarn, fiber, cord, or thread that has been coated, printed, slashed, dyed or finished.

We intend the source category to include sources for which fabric and other textiles coating, printing, slashing, dyeing and finishing is either their principal activity or an integral part of a production process that is the principal activity. Many coating, printing, slashing, dyeing and finishing operations are located at plant sites that are dedicated to these activities. However, some are located at sites for which some other activity is principal, such as production of sheets and towels or rubber belt manufacturing. Collocated coating, printing, slashing, dyeing and finishing operations comparable to the types and sizes of the dedicated affected sources, in terms of the affected operation and applicable emission control techniques, are included in the source category.

The source category does not include research or laboratory facilities; janitorial, building, and facility maintenance operations; coating, printing, slashing, dyeing, or finishing operations in which no organic HAP-containing materials are used; or coating, printing, slashing, dyeing or finishing used by a facility and not for commerce, unless organic HAP emissions from the coating, printing, slashing, dyeing or finishing operations are at major source levels.

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

After reviewing survey responses from the industry, facility site visit reports, and information received from stakeholder meetings, we found that the printing, coating, and dyeing of fabrics and other textiles source category may be grouped into three subcategories with differing material application and performance requirements, emission characteristics, applicable add-on emission controls and pollution prevention opportunities. The three subcategories are: (1) Coating and printing, (2) slashing, and (3) dyeing and finishing. The following paragraphs include descriptions of each subcategory.

Coating and printing subcategory. The coating and printing subcategory includes affected sources that apply coatings to or print textile substrates. The coating and printing manufacturing processes, HAP emissions, and types of controls in use sufficiently set them apart from the other processes that are used in the manufacture of textile products to warrant a subcategory. Coating is a web coating operation, and the physical operations and most sources performing coating are separate and distinct from the other textile operations. Many coating operations are subject to State reasonably available control technology requirements or to the polymeric coating of supporting substrates NSPS (40 CFR part 60, subpart VVV) and have installed emission control systems for VOC. Since a number of the VOC emitted from coating operations are also organic HAP (*e.g.,* toluene, MEK, xylene, and methanol), the VOC emission control systems in place are also effective for controlling organic HAP emissions. Printing is a web process very similar to coating and uses some of the same equipment. The application and drying of printing materials and the organic HAP emission sources are identical or nearly identical to coating, and, therefore, the control options and limits for coating would be applicable to printing as well.

Coating is a specialized chemical finishing technique designed to produce textiles to meet high performance requirements, *e.g.,* for end products such as tents, roofing, soft baggage, marine fabric, drapery linings, flexible hoses, hot-air balloons, and awnings. Coatings generally impart elasticity to substrates, as well as resistance to one or more elements such as abrasion, water, chemicals, heat, fire, and oil. The substrate itself provides strength (such as tear strength) and can include wovens, nonwovens, knits, yarn, cord, and thread, although woven fabrics are most commonly used.

Printing is the application of color to a substrate in a design or pattern. In some cases, the printing material is chemically the same as coating material only thinned to a lower viscosity. There are typically four types of printing, including rotary screen, engraved roller, flat-bed screen, and heat transfer. Rotary screen and engraved roller closely resemble coating and use principally the same type of equipment as coating. Flat-bed screen is typically not a high production technique and does not emit large quantities of HAP over a period of time given the limits of production. Heat transfer emits little or no HAP in the transfer of the print to the substrate.

Both the substrates coated and printed as well as the coatings themselves vary. A number of different substrates can be coated including rayon, nylon, polyester, cotton, and blends. Coating chemicals used vary depending on end use of the coated substrate. Examples of coating chemicals include vinyl, urethane, silicone, and styrene-butadiene rubber. The polymer can be bought in various forms such as chunks, blocks, chips, pellets or fine powder. However, besides the polymer resins, several other chemicals can also be included in the prepared coating. These include plasticizers to increase pliability (*e.g.*, fatty acids, alcohols), solvents to disperse solids and adjust viscosity (*e.g.*, toluene, xylene, N,N-dimethylformamide, and MEK), pigments, curing agents, and fillers (*e.g.*, carbon black and teflon). Rubber coating materials are frequently compounded in the facility performing the coating. Manmade fibers coated with epoxy or phenolic resins are often not immediately cured following application, but are first laid in a mold and then cured under pressure to form a composite structure.

The coating or printing process generally is made up of the following unit operations: mixing the coating or printing materials (including the solvents), conditioning the substrate, applying the coating or printing materials to the substrate, evaporating the solvent in a drying oven and sometimes curing or vulcanizing by exposure to heat, and cleaning coating or printing operation equipment. A coating or printing operation with coating or printing material drying or curing at ambient conditions is not coating or printing for the purpose of the proposed subpart. Therefore, a coating or printing operation that does not dry or cure the applied coating or printing material by exposure to heat is not subject to the requirements of the proposed subpart.

The application processes used by affected sources in the industry are similar in that they use continuous web coating techniques, but they include several types of coating and substrates. The coating industry treats coating as a surface applied coating in which a distinct layer of coating is applied to the textile surface.

Slashing subcategory. The slashing subcategory includes affected sources that perform slashing operations. The slashing equipment, emission characteristics, and opportunities for pollution prevention in the industry are distinct from those in the rest of the fabric and other textiles coating, printing, and dyeing source category, warranting a separate subcategory.

Slashing is a yarn preparation process performed on warp yarn prior to weaving. Warp yarns need to sustain their elongation and flexibility during the weaving process, which necessitates the slashing process. In the slashing process, large rolls (beams) of warp yarn are passed through a size box containing the aqueous sizing compound. Squeeze rolls remove excess solution and the yarn then passes through a drying unit that usually consists of steam filled dry cans (rollers) or an oven and then through a series of separator bars to prevent the ends from sticking together. After the separation process, the warp is then wound onto the loom beam. Some mills perform desizing. During the desizing step, at the end of the textile process, most of the sizing (slashing material) is removed from the textile by washing and the sizing is present in the wastewater.

The objectives of slashing are to strengthen, smooth the outer surface, and lubricate the yarn. The chemical nature of the size applied is dependent on the yarn substrate and the type of weaving being used. The three main types of size currently used are natural products (starch), fully synthetic products (*e.g.*, PVA), and semisynthetic blends (*e.g.*, modified starches and carboxymethyl cellulose (CMC)).

When starch or modified starch is the sizing compound, there is water but no HAP emitted from the slashing process. Starch is used principally on cotton, but does not work well on synthetic fibers. Also, starch is not more widely used and is not a good substitute for synthetic sizing because of water pollution concerns. Starch greatly increases the biological oxygen demand and cannot be partially recycled.

The PVA and CMC are typically recycled when possible to reduce water treatment and water pollution. The CMC is not as widely used as starch and PVA because of the cost of the material. The CMC is not as effective in the slashing process on cotton and synthetic textiles as starch, modified starches, or PVA, respectively.

The primary source of HAP emissions from slashing is methanol from PVA size, typically applied to synthetics (although it adheres to and is used for natural fibers as well). The methanol is present in the PVA size as a contaminant and is not needed for the slashing process. The methanol emissions can arise either from the size cooking operation and/or from the application or slashing process; the distribution is unclear, although it will depend upon the temperature at which the size is cooked, the cooking time, and how often mixing containers (cookers) are opened. These processes are not presently regulated by Federal, State or local agencies, and there are no known HAP emission capture or add-on control systems in use on size cooking or slashing processes. However, information submitted to us from suppliers representing approximately 74 percent of the domestic market for PVA indicate that PVA with less than 1 percent methanol is readily available, and these suppliers are now changing their production to supply the lower HAP material.

Dyeing and finishing subcategory. The dyeing and finishing subcategory includes affected sources that perform dyeing and/or finishing operations. The process operations, materials and the organic HAP emissions sufficiently set these processes apart from the other processes that are used in the manufacture of textile products to warrant a subcategory. Dyeing and finishing processes both use various types of aqueous materials, the choice of which depends on the type of substrate and the desired properties in the end product. Many affected sources perform both dyeing and finishing and use some common equipment (*e.g.*, tenter frames) for unit operations in both processes. In some cases, the finishes are applied to the substrate wet from the dyeing process, and no drying is done until after the finish application. No add-on organic HAP emission controls are known to be in use on dyeing processes and very few on finishing processes. The few add-on emission controls used on finishing processes were installed to control opacity and are not effective at controlling organic HAP emissions. The similarities of process operation equipment, sources of organic HAP emissions (many of which are fugitive), absence of add-on HAP emission controls and opportunities for pollution prevention in the dyeing and finishing industry lend these operations well to subcategorization for the purpose of determining emission limits.

Dyeing is the application of color to the whole body of a textile material with some degree of color fastness. Textiles are dyed using continuous and batch processes, and dyeing may take place at any of several stages in the manufacturing process (*i.e.*, prior to fiber extrusion, fiber in staple form, yarn, fabric, garment). Most of the dyeing is done in finishing departments of basic manufacturing sources, although there are also several commission dyehouses. From an environmental perspective, dyeing has typically been viewed as a wastewater issue due to large quantities of water, chemicals, and auxiliaries (such as salt) used.

Dyeing is essentially a mass transfer process where the dye diffuses in solution, adsorbs onto the fiber surface, and finally, within the fiber. Dyeing is complicated by the fact that there are many sources of color variations, such as dyes, substrate, preparation of substrate, dyeing auxiliaries used, and water. Processing variables such as time, temperature, and dye liquor ratio (lbs of dyebath to lbs of cloth) also affect dyeing results. There are hundreds of dyes within several dye classes, each of which exhibits different results when applied to different types of substrates.

Various types of dyeing machines are used for both continuous and batch processes. Every dye system has different characteristics in terms of factors such as versatility, cost, tension of substrate, use of carriers and weight limitations. Dyeing systems can be aqueous, nonaqueous (inorganic solvents), or use sublimation (thermosal, heat transfer). Hydrophilic fibers such as cotton, rayon, wool, and silk are typically easier to dye as compared with hydrophobic fibers such as acetate, polyesters, polyamides, and polyacrylonotriles.

The four basic steps in the dyeing process are: dissolving or dispersing dye, diffusing dye onto the fiber surface, absorbing dye onto the fiber surface, and diffusing dye into the fiber. Batch dyeing involves moving the dye liquor through the goods or moving the goods through the dye liquor. The substrate is immersed in the dyebath during the entire period of dyeing. In batch dyeing, a certain amount of substrate, usually 220 to 2,200 lbs, is loaded onto a dyeing machine and is brought to equilibrium or near equilibrium with a solution containing the dye. Once immersed in the dye bath, because the dyes have an affinity for the fibers, the dye molecules leave the dye solution and enter the fibers over a period of minutes to hours.

Auxiliary chemicals and controlled dyebath conditions (mainly temperature) accelerate and optimize the action. The dye is fixed in the fiber using heat and/or chemicals after which the substrate is washed to remove unfixed dyes and chemicals. There is a trend to use lower liquor ratios (lbs of dyebath to lbs of cloth) in batch dyeing, which lends benefits such as faster heating/cooling and less waste. Batch equipment can usually be purchased as atmospheric (operated below 212 degrees Fahrenheit) or pressurized (operated to about 280 degrees Fahrenheit) machines. Most batch dyeing is being done using pressurized machines, although some sources use atmospheric machines, especially for dyeing. Atmospheric dyeing might be required for fleeces and stretch fabrics, such as Lycra®, which typically cannot be dyed using jet equipment. Dyeing processes in pressurized machines release no organic HAP emissions to the atmosphere since the process is totally enclosed, and the pressure is released at the end of the dyeing process by cooling the dye bath which is subsequently drained before opening the dyeing machine. However, in some cases, the drying of the pressure-dyed substrate releases HAP emissions.

Continuous processes typically consist of dye application, dye fixation with chemicals or heat, and washing. Almost all continuous dyeing is done at atmospheric pressure. Continuous dyeing is usually used for long runs of polyester/cotton fabrics and involves immersing fabrics in a relatively concentrated dyebath for short periods. Substrate is fed continuously into a dye range at speeds usually between 540 and 2,690 feet per minute, and a concentrated solution of dyes and chemicals (held in pads) is moved evenly and uniformly to the goods with thorough penetration. A pad mangle helps apply pressure to squeeze dye solution into the fabric, and the dye is usually diffused or fixed by heating in a steamer or oven. Dye fixation on fiber occurs much more rapidly in continuous dyeing as compared to batch dyeing. After fabrics are dyed, they are dried in ovens or tenter frames after washing to remove un-reacted chemical or loose dye. A substrate that is processed through atmospheric batch dyeing is not dried at the dye range; it is sent to finishing and may be finished wet or dry.

Various classes of dyes can be used, *e.g.*, disperse for synthetics and direct for cellulosics. Dyes used in the textile industry are mostly synthetic and are derived from coal tar and petroleum-based derivatives. Dyes are sold as powders, granules, pastes, liquid dispersions, and solutions. Not only are dyes applied in different ways, they also impart color using different mechanisms. Dyes can be classified according to chemical constitution or method of application. Dyestuffs can work on principles of electrostatic bonding, covalent bonding, or physical entrapment. For example, acid dyes work through the mechanism of electrostatic bonding, whereas disperse dyes work by physical entrapment. Different dye classes exhibit different affinities depending on the type of fiber, although even dyes within the same classes can show wide affinity variations. They also exhibit different properties such as their fastness under end use conditions (*e.g.*, light, laundering, or dry cleaning).

Various combinations of chemical auxiliaries and process conditions (temperature and pressure) may be used to better fix the dye on the textile or impart specific characteristics. For example, a dye bath may contain the dyestuffs along with appropriate auxiliaries such as wetting agents and also specific chemicals such as acetic acid or sodium hydroxide. The use of higher temperatures and superatmospheric pressures have reduced the need for dye carriers (chemical accelerants) that were required at lower temperatures for the use of disperse dyes on synthetic substrates, such as polyester.

The sources of HAP emissions from dyeing are the HAP constituents that are contained in dyestuffs and auxiliary chemicals as purchased. The HAP constituents are needed to impart certain desirable characteristics to the dyed substrate (*e.g.*, certain colors can only be attained through the use of HAP-containing dyestuffs or auxiliaries.) No HAP are known to be added by the users. The fraction of HAP contained in dye materials that are emitted to the atmosphere are generally estimated to range from zero to 10 percent, but have been reported as high as 100 percent, and depend on the characteristics of the specific HAP constituents and the pressures and temperatures that the HAP are exposed to in the dyeing process operations. The fraction of HAP emitted to the atmosphere from dye materials have not been confirmed by test data. Most HAP constituents are believed to be rinsed from the substrate before the substrate is dried, because drying a substrate with unattached dye would adversely affect the quality of the dyed product.

Finishing refers to any process operation performed after bleaching, dyeing, or printing that improves the appearance and/or usefulness of a textile substrate. Finishing encompasses any of several mechanical (*e.g.*, texturizing, napping) and chemical processes (*e.g.*, optical finishes, softeners, urea-formaldehyde resins for crease resistance) performed on fiber, yarn, or fabric to improve its appearance, texture, or performance. The organic HAP emission sources from finishing are specific chemical compounds that may be applied and released during subsequent drying and curing operations. Chemical finishing is also referred to as wet finishing. No chemicals are used in mechanical or dry finishing.

The textile is usually dried prior to chemical finishing using either convective (hot air) or conductive (heated cans) methods. Chemical finishing is commonly done on a continuous finishing range (pad and tenter frame). The textile is passed through an aqueous solution containing the finishing chemical(s) and auxiliaries. After treatment, the textile is typically passed through an oven to drive off water and activate/cure finishing chemicals. It is important to note that there is no set recipe for the chemical finishes or mechanical finishing processes applied to any given substrate. Finishing methods are used according to desired characteristics of the end product (which vary widely and are market driven), and the firms themselves have some amount of flexibility in the specific processes or chemicals they choose to use for a particular function.

The industry uses numerous categories of proprietary chemical speciality products that are used as chemical finishes. Some examples of chemical finish classes include:

- Resin finishes (permanent press) are used on cotton or rayon to minimize the need to iron by keeping the fabric smooth after washing and drying. Most resins contain formaldehyde; resins without formaldehyde are typically much costlier and adversely affect product quality.
- Softeners are used with resins to improve the way the fabric feels by breaking down hardness or stiffness.
- Stain resist finishes are used extensively on carpets and upholstery fabrics. Soil release finishes allow soils and stains to be removed by laundering.
- Water repellants used to prevent fabrics from being wet out (breathable, unlike waterproofing agents) include, but are not limited to, wax, silicone, and fluorine.
- Flame retardant qualities can be achieved by using special fibers or phosphorus-based finishes.
- Antistatic agents decrease or eliminate static electricity in textiles.
- Handbuilders give the fabrics body or stiffness. Other examples of types of chemical finishes include anticreasing agents, deodorants, moth resisting agents, oil repellants, rust preventatives, and shrinkage controllers. Some companies use more specialized finishes like electrical finishes and teflon®. Because there are typically a wide variety of choices of chemical finishes that can be used within each finish class, it is often difficult to tag finishes used in certain classes as always toxic or nontoxic. In certain cases, as in the case of permanent press finishes, most of the resins used contain formaldehyde, although low or non-formaldehyde finishes are being developed to suit certain applications.

There are also several different types of mechanical finishing techniques. For example, heatsetting can be done to improve dimensional stability in synthetic textiles. Shearing involves using rotary blade(s) to trim raised surfaces and reduce pilling. Other examples include embossing, glazing, sueding, and polishing.

Many chemical and mechanical alternatives are available for every finishing operation, but the specific nature and applicability of these is unclear. Some mechanical finishes and design alternatives can avoid chemical processing. For example for softness, enzyme softening of cotton and other mechanical alternatives can be used. Proper use and application of N-methylol crosslinkers can minimize formaldehyde releases. Mechanical finishing (compacting) can also eliminate use of the crosslinker. Some crosslinkers that eliminate formaldehyde are available, but much more expensive. The industry has made a lot of efforts to reduce the amount of free formaldehyde in resins, however good substitutes that do not adversely affect the quality of the product are difficult to find. Formaldehyde contents can vary anywhere from less than one half of one percent for light weight fabrics to 4 percent for heavy fabrics (melamine-formaldehyde resins), and there is a lot of variability in types of resins. Formaldehyde itself does not affect the product, however it does affect the properties of the resin itself (manufacturing). Acrylic handbuilders and stiffeners can replace formaldehyde-based handbuilders.

The sources of organic HAP emissions from finishing are the HAP constituents that are contained in finishing materials as purchased. As is the case with dyeing, the organic HAP constituents are needed to impart certain desirable characteristics to the finished substrate (*e.g.*, a resin finish containing organic HAP might be applied to a cotton/polyester blend for durable press and dimensional stability). No organic HAP are known to be added by the users. In finishing, unlike in dyeing, the fraction of organic HAP contained in finishes that are emitted to the atmosphere are generally assumed to be 100 percent with the exception of HAP that cross-link to the fiber, such as formaldehyde. This is because the finished textile is typically dried and cured at relatively high temperatures over 300 degrees Fahrenheit.

B. How did We Select The Regulated Pollutants?

Organic HAP. Available emission data collected during the development of the proposed NESHAP show that the primary organic HAP emitted from printing, coating and dyeing sources include toluene, MEK, methanol, xylenes, MIBK, methylene chloride, n-hexane, trichloroethylene, and n,n-dimethylformamide. These compounds account for approximately 81 percent of this category's nationwide organic HAP emissions. However, many other organic HAP are used, or can be used, in coating, printing, slashing, dyeing, and finishing operations. Therefore, the proposed rule would regulate emissions of all organic HAP.

Inorganic HAP. Based on information reported during development of the proposed NESHAP, inorganic HAP contained in the coating, printing, dyeing and finishing materials used by this source category include chromium, cobalt, hydrogen chloride, lead, manganese compounds and nickel. There is limited opportunity for these HAP to be emitted into the ambient air because all of the application techniques used involve direct application of the inorganic HAP-containing material to the substrate by techniques such as knife-over-roll, reverse roll, dip, pad and immersion. These techniques would not typically generate air emissions of the inorganic compounds. Once deposited on the substrate, the inorganic compounds remain on the substrate and are not emitted during subsequent drying and curing process operations. Therefore, we conclude that there are limited or no air emissions of inorganic HAP, and the proposed standards would not regulate them.

C. How Did We Select the Affected Source?

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

When an emission standard is based on a collection of emissions sources, or total facility emissions, we select an affected source based on that same collection of emission sources, or the total facility, as well. This approach for defining the affected source broadly is particularly appropriate for industries where a plantwide emission standard provides the opportunity and incentive for owners and operators to utilize control strategies that are more cost effective than if separate standards were established for each emission point within an affected source.

Selection of affected source. The affected source for the proposed standards is broadly defined for each subcategory. It includes all operations associated with coating and printing, with slashing, or with dyeing and finishing and in all cases includes the cleaning of process operation equipment. These operations include storage and mixing of regulated materials, regulated material application and flash-off and drying and curing of applied materials by exposure to heat, cleaning operations, waste handling operations, and wastewater treatment operations.

In selecting the affected source, we considered, for each operation, the extent to which HAP-containing materials are used and the amount of HAP that are emitted. Coating, printing, slashing, dyeing and finishing material application, flash-off, and curing/drying operations by exposure to heat account for the majority of HAP emissions from coating, printing, slashing, dyeing and finishing operations. These operations are included in the affected source.

We were not able to obtain data to adequately quantify HAP emissions from storage, mixing, cleaning, waste handling and wastewater treatment. However, solvents that are added to coatings as thinners, for example, and HAP from other HAP-containing materials such as dyeing or finishing auxiliaries, may be emitted during mixing and storage. The level of emissions depends on the type of mixing and the type of storage container and the work practices used at the affected source. The magnitude of emissions from cleaning depends heavily on the amount and HAP content of cleaning materials used. Emissions from waste handling operations depend on the type of system used to collect and transport organic HAP-containing waste materials in the affected source. For example, solvent-laden rags that are used to clean application equipment could be a source of HAP emissions. The method used to isolate and store such rags affects the level of emissions to ambient air. The HAP emissions from wastewater treatment depend on the quantity and types of HAP discharged to the wastewater treatment operation and the subsequent wastewater treatment processes, e.g., treatment by aeration or by biodegradation. Mixing, storage, cleaning, waste handling, and wastewater treatment operations are included in the affected source.

A broad definition of the affected source was selected to provide maximum flexibility in complying with the proposed emission limits for organic HAP. In planning its total usage of HAP-containing materials, each affected source can select among available coating, printing, slashing, dyeing, finishing, thinning, and cleaning materials, as well as use of emission capture systems and add-on controls for coating and printing operations, to maximize emissions reductions in the most cost-effective manner.

Additional information on the coating, printing, slashing, dyeing and finishing operations is included in the docket for the proposed standards.

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

The sections below present the rationale for determining the MACT floor, regulatory alternatives beyond the floor, and selection of the proposed standards for existing and new or reconstructed affected sources in each of the three subcategories identified in the Printing, Coating, and Dyeing of Fabrics and Other Textiles source category.

How did we determine the MACT floor technology? After we identify the specific source categories or subcategories of sources to regulate under section 112 of the CAA, we must develop emission standards for each category and subcategory. Section 112(d)(3) establishes a minimum baseline or ''floor'' for standards. For new sources in a category or subcategory, the standards cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source. The standards for existing sources can be less stringent than standards for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources (or the best-performing five sources for categories or subcategories with fewer than 30 sources).

Coating and printing subcategory. There are an estimated 60 facilities in the coating and printing subcategory. Quantitative data on HAP use and emission control were obtained from 22 coating sources. The 22 sources in the MACT database are representative of the different sizes of companies and the range of products in the national population of coating sources. Qualitative data providing descriptions of coating and printing processes, HAP control technologies, and process and control technology concerns also were obtained from site visits and industry trade groups, such as the Rubber Manufacturers Association. These data verified that the coating processes and HAP emission sources are similar for all coating types and that similar HAP control technologies are used. They also verified that, although we do not have quantitative data on printing operations, it is reasonable to use the coating data for making decisions for both coating and printing sources due to the similarities between coating and printing processes and materials used.

The MACT database shows that the most common approach for reducing organic HAP emissions at coating and printing sources is the use of add-on capture and control systems. At the sources reporting the highest level of control, coating application stations are enclosed in rooms, and the ventilation air is directed to the add-on control device. This type of capture system can achieve 100 percent capture of emissions when designed to meet the criteria specified in EPA Method 204 of 40 CFR part 51, appendix M. This capture system is called a PTE. Of the 22 sources in the MACT database, six reported the use of PTE and 13 reported that they operated control devices on a total of 29 coating lines. Of the 29 controlled lines, 16 lines use thermal oxidizers, three lines use catalytic oxidizers, nine lines use carbon adsorbers, and one line uses an electrostatic precipitator.

The MACT database contains information concerning the level of HAP emissions from coating application and drying/curing, the capture efficiency for each coating application area or for the entire coating line, and the destruction or removal efficiency of the add-on control device receiving the HAP emissions. We were able to determine the coating line application and drying/curing OCE for each source from this information when available. This value was the most common among all the data available, and it was determined that the coating application and drying/curing OCE was the value that was most correlated with HAP emissions. Therefore, the coating application and drying/curing OCE was used as the basis for the MACT floor calculations. The OCE was calculated as a sourcewide average to incorporate the effects of averaging across coating lines in sources with more than one coating line.

To determine the existing source MACT floor, the sources were ranked based on the average OCE. The statute requires EPA to base the floor for existing sources on the average emission limitation achieved by the best performing 12 percent of existing sources for which the Administrator has data. The best performing 12 percent of the 22 sources in the MACT database constitutes a set of three affected sources. All three of the best-performing sources use capture systems and add-on control devices including both thermal oxidizers and carbon adsorbers. The two sources using thermal oxidizers are achieving 100 percent capture of application station emissions through the use of PTE. The reported OCE for the top three sources ranged from 93 to 99 percent. These data clearly indicate that controls on some specific coating operations may be capable of achieving greater than 99 percent HAP destruction based on 100 percent capture and thermal oxidizer destruction efficiency greater than 99 percent. However, to determine the level of emission control that is technically and consistently achievable over the long term with thermal oxidation, it is important to consider not only the level of control reported, but also the data quality concerns and the control levels that EPA has generally found to be achievable for this type of control technology. This approach ensures that factors that affect control levels, such as variations in source operating conditions and inlet loadings to the add-on control device, are accommodated in the determination of the MACT floor.

A study conducted by EPA indicated that a 98 percent reduction is the minimum control efficiency that new thermal oxidizers can be expected to achieve. Information from vendor guarantees supports the determination of a destruction efficiency of 98 percent for thermal oxidizers. Therefore, we adjusted the destruction efficiencies for the two MACT floor sources using thermal oxidizers to 98 percent. The calculated MACT floor using the adjusted value results in an average 97 percent OCE for the three sources that make up the best-performing 12 percent of sources in the coating and printing subcategory. Therefore, the MACT floor for existing sources is 97 percent OCE.

As indicated previously in this preamble, the MACT floor for new sources must reflect the emission control achieved in practice by the best-controlled similar source. The OCE data cited above show that the best-controlled similar source for which we have data is using a PTE to achieve 100 percent capture and a thermal oxidizer, which as described above, we have determined can consistently achieve 98 percent destruction. Therefore, a 98 percent OCE is the MACT floor for new and reconstructed sources in the coating and printing subcategory.

Data from the coating MACT database were used to calculate alternative emission rate limits for existing and new and reconstructed sources. The alternative organic HAP emission rate was calculated based on applying the MACT floor OCE (97 percent for existing sources and 98 percent for new and reconstructed sources) to a pre-controlled HAP emission rate representative for this industry. This calculation process, described in the docket, resulted in HAP emission rates of 0.12 lb of organic HAP per lb of solids for existing sources and 0.08 lb of organic HAP per lb of solids for new and reconstructed sources. The alternative emission rate limits are being proposed to provide compliance flexibility for affected sources.

Slashing subcategory. As has been previously noted in this preamble, the primary source of HAP emissions from slashing is methanol from PVA size. The methanol emissions can arise either from the size cooking operation, the application process, or both; the distribution is unclear. Also as previously noted, there are no known HAP emission capture or control systems in place on size cooking or slashing processes. Therefore, we judged that the most reasonable approach to establishing a MACT floor would be to identify a pollution prevention option that is the average being achieved by all affected slashing operations.

Based on information submitted to the EPA by the American Textile Manufacturers Institute (ATMI) on September 17, 1999, we determined that the majority, not just the top 12 percent, of the domestic textile market in 1998 was using PVA for slashing with methanol comprising less than 1 percent by weight of the PVA ‘‘as purchased.’’ Methanol is a contaminant in the PVA that is a residual material from the manufacture of the PVA. Prior to 1999, the typical PVA sizing compound contained from 4 to 10 percent methanol. The ATMI submittal included letters from suppliers representing approximately 74 percent of the domestic market for PVA. The letters indicated that the ‘‘less than 1 percent methanol’’ is readily available and that the suppliers are changing their production to supply the lower HAP material. The letters provide detailed information from the PVA suppliers and are located in the Confidential Business Information files at EPA. Information collected from the WWW on two domestic suppliers of PVA confirms that PVA with ‘‘less than 1 percent methanol’’ is readily available from suppliers.

On the basis of the information described above, we determined that the MACT floor for the slashing subcategory is the use of low-HAP PVA containing less than 1 percent HAP, by weight, ‘‘as purchased.’’ For the purpose of determining the mass fraction of organic HAP in a slashing material, each organic HAP that is not an OSHA-defined carcinogen as specified in 29 CFR 1910.1200(d)(4) and that is measured to be present at less than 1 percent is counted as zero. Therefore, since methanol is not an OSHA-defined carcinogen, the floor for slashing is zero organic HAP. Other synthetic organic sizing compounds in use also contain HAP, but the HAP content of these sizing compounds is well below 1 percent.

Because PVA sizing is available with zero organic HAP, and this represents the emission rate achieved by the majority of sources in this subcategory and by the ''best similar source,'' the MACT floor for existing, new, and reconstructed sources is the pollution prevention option of zero organic HAP in the sizing material ''as purchased.''

Dyeing and finishing subcategory. Quantitative data on dyeing materials usage were received from 41 sources. Similarly, quantitative data on finishing materials usage were received from 31 sources. All of the information in the dyeing and finishing MACT database is confidential; therefore, no individual facility data are presented in this preamble.

Qualitative information providing descriptions of dyeing and finishing processes, pollution prevention opportunities, and verification that add-on control technologies generally are not used on dyeing and finishing HAP emission sources were also obtained from site visits and industry trade groups such as the ATMI. The qualitative data provide a representation of the dyeing and finishing industry and verify that the MACT database is reflective of the variety of dyeing and finishing processes that are used by the affected sources that will be subject to the proposed rule.

The MACT floors for dyeing and finishing were evaluated on the basis of the HAP content of the purchased materials used in the dyes and finishes applied. There are currently no emission controls used to reduce HAP emissions from dyeing operations. The few emission controls used on finishing operations were installed to reduce opacity and most are not efficient at reducing HAP emissions. Furthermore, no emission factors have been developed for dyeing or finishing operations and the split of emissions, particularly from dyeing, are dependent on site specific conditions such as the unit operations the textile passes through in the process range, the types of equipment used for the process, the dye or finish chemistry, and the process conditions, e.g., the points in the process where the textile is subjected to heat. Finally, the available data include information on the HAP content of the dyeing or finishing materials used annually and HAP emission estimates based on the mass of HAP contained in the materials used in the process. Defining the MACT floor in terms of the mass of HAP per mass of purchased materials (weight percent HAP in the purchased materials) correlates directly to HAP emissions, serves to reduce the HAP emissions at the source, and is not dependent on the split of emissions between different unit operations in the process range or between media (air and water).

For this analysis, we determined that a total of 30 of the 41 sources with dyeing processes in the MACT database are major or synthetic minor HAP emission sources and 12 of the 29 sources with finishing processes in the MACT database are major or synthetic minor HAP emission sources. Eleven sources with dyeing processes could not be used in the MACT floor analysis for the following reasons: one source has been shut down, nine are area sources, and the title V HAP status of one source has not been determined. Similarly, 19 sources with finishing process information could not be used in the MACT floor analysis for the following reasons: one source has been shut down, one reported only coating process information, 15 are area sources of HAP emissions, and the title V HAP status of two sources has not been determined. Information from the sources with indeterminate title V HAP status was examined to determine if any of the sources could potentially be MACT floor sources. None was determined to be a MACT floor source. Separate MACT floor analyses were done for dyeing and finishing, as described in the following paragraphs.

We evaluated two different approaches for determining the MACT floor in weight percent organic HAP in dyeing materials. The dyeing survey collected information on the organic HAP content of dyes and of auxiliary chemicals, which we refer to in this discussion as ''dye materials.'' There are 11 chemical dye classes in which these dye materials are classified. In the first approach to determining the MACT floor, we determined the weight percent organic HAP in dye materials for each source in the MACT floor database, without regard to the dye classes used at each source. To calculate the weight percent organic HAP, the mass of organic HAP in dye materials as purchased was calculated and divided by the total mass of dye materials purchased. The result was multiplied by 100 to calculate the weight percent HAP in dye materials purchased by each source. For the four best-performing sources (12 percent of 30 sources), each of which reported zero organic HAP in dye materials as purchased, the calculated MACT floor was zero weight percent organic HAP. However, under this approach only three of the 11 dye classes reported in the dyeing survey were represented in the MACT floor.

Since the choice of a dye class depends on many factors, including substrate, color (market driven), end use of the dyed substrate, and quality (*e.g.,* dye fastness), and cannot be made purely on the basis of organic HAP content of the materials, we chose a second approach to determining the MACT floor that would represent all of the dye classes reported in the dyeing survey. Under this second approach, a MACT floor analysis was done for each dye class in the database. For each dye class, the weight percent organic HAP in dye materials purchased was calculated for each source using the dye class. The usage of different dye classes varied across the sources. Some dye classes were used by as few as two sources while others were used by as many as 14 sources. Therefore, the number of best-performing sources for each dye class was either one or two (taking 12 percent of the number of sources using the dye class and rounding up to the next whole number).

To determine the MACT floor for dyeing, we calculated a weighted average organic HAP content of dye materials as purchased from the dye class MACT floors, using the total mass of dye materials used by the MACT floor source or sources for each dye class to weight the dye class MACT floor organic HAP contents. The dyeing MACT floor organic HAP content in materials as purchased was determined to be 1.58 weight percent for existing sources.

No technology has been identified that could achieve a lower organic HAP content in materials as purchased. Therefore, the dyeing MACT floor organic HAP content in materials as purchased for new and reconstructed sources was also determined to be 1.58 weight percent.

Since the choice of a finish class depends on the desired characteristics of the finished substrate and cannot be made solely on the basis of the HAP content of the finish, we also chose the approach of calculating the MACT floor that would represent all of the finish classes reported in the finishing survey. As was the case for dyeing, a MACT floor analysis was done for each finish class in the database. The finishing survey collected information on the organic HAP content of each finish class as purchased. In some cases, sources reported different chemistry for finishes within the same finish class for use on different products. Therefore, for each finish class used by each source, the weight percent organic HAP in finishing materials purchased was calculated by determining the total mass of organic HAP in finishing materials as purchased for the finish class (sum of the mass of organic HAP in different formulations within the finish class), divided by the total mass of finishing materials purchased for the finish class (sum of mass of finishing materials purchased within the finish class) multiplied by 100. The one source (12 percent of the number of sources reporting use of the finish class, which ranged from one to eight) reporting the lowest weight percent organic HAP in finishing materials for each finish class was chosen as the floor affected source. The usage of different finish classes varied across the sources. Some finish classes were used by only one source while others were used by as many as eight sources. Therefore, there was only one best-performing source for each finish class (taking 12 percent of the number of sources using the finish class and rounding up to one).

To determine the MACT floor for finishing, we calculated a weighted average organic HAP content of finishing materials as purchased from the finish class MACT floors, using the total mass of finishing materials used by the MACT floor source for each finish class to weight the finish class MACT floor organic HAP contents. The weighted average organic HAP content in finishing materials as purchased was determined to be 0.03 weight percent for existing sources. As was the case for the slashing subcategory MACT floor, for the purpose of determining the mass fraction of organic HAP in a finishing material, each organic HAP that is not an OSHA-defined carcinogen as specified in 29 CFR 1910.1200(d)(4) and that is measured to be present at less than 1 percent, is counted as zero. Therefore, the finishing MACT floor for existing sources is zero organic HAP in finishing materials as purchased.

No technology has been identified that could achieve a lower organic HAP content in finishing materials as purchased. Therefore, the finishing MACT floor for new and reconstructed sources was also determined to be zero organic HAP in finishing materials as purchased.

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

Coating and printing subcategory. The beyond-the-floor levels of control for coating and printing, to be considered, must be greater than an OCE of 97 percent for existing sources. The floor for existing sources was based on the use of control equipment with a control efficiency of 97 percent and a capture efficiency of 100 percent. In addition, we applied the 97 percent MACT floor OCE to a pre-controlled HAP emission rate representative for this industry to calculate an alternative emission rate limit.

We identified two regulatory alternatives more stringent than the existing source MACT floor level of control for organic HAP and the alternative emission rate limit. These alternatives were conversion to coating and printing materials that have a very low, or no, organic HAP content and use of add-on capture systems and add-on control devices to achieve an OCE of 98 percent.

Lower-organic-HAP liquid coatings fall into two primary categories. The most common category is waterborne coatings, which allow the mixing of certain materials that would be incompatible in organic solvent borne coatings. The second category is higher solids coatings that result from alternate technologies such as ultraviolet (UV)-curable coatings and electron beam (EB)-curable coatings. Some urethane coatings can be applied with a thermal process. These coatings do not employ organic HAP or VOC to keep the pigment and other components of the coating in solution until curing. Therefore, organic HAP emissions are very small.

These lower-organic-HAP coatings are currently in production use for some products in the coating industry, but their applicability is limited in that, for some products, these coatings are not able to achieve the desired final product characteristics. Similarly, low-organic-HAP or waterborne printing materials are used for the majority of printed products, but these printing materials are not able to achieve the desired final product characteristics for certain products, such as designer and fashion apparel, requiring the use of higher organic HAP printing materials. Given the limited applicability of waterborne, UV-curable, EB-curable, and thermal (hot-melt) coating and waterborne printing materials, we do not believe it is feasible to require the use of these coating and printing materials and rejected them as a beyond-the-floor option for organic HAP.

It is technically feasible to reduce emissions from affected sources by at least 98 percent through the use of capture systems and add-on control devices. Based on the model plants analysis used to estimate the impacts of the proposed rule, the incremental HAP reductions that could be achieved by using capture systems and add-on control devices to comply with a ''beyond-the-floor'' alternative of 98 percent reduction would range from about 0.09 megagram (Mg) (0.1 ton) to about 3.8 Mg (4.2 tons) per affected source. The 98 percent reduction alternative would result in an estimated additional HAP reduction of 32 tons per year. To achieve this small incremental HAP emissions reductions, existing affected sources would have to upgrade or replace most existing add-on control systems. We believe the incremental emissions reductions that would be achieved at this time are not supported by the additional cost that many existing sources would incur to upgrade or replace existing add-on control systems. Therefore, we rejected requiring 98 percent overall control as a beyond-the-floor option for organic HAP at existing sources in the coating and printing subcategory.

The beyond-the-floor levels of control for coating and printing, to be considered, must be greater than an OCE of 98 percent for new or reconstructed affected sources. The new source floor was based on the use of control equipment with a destruction efficiency of 98 percent and a capture efficiency of 100 percent. Vendors could not guarantee greater than 98 percent destruction efficiency for the operating conditions experienced in coating and printing and over the life of the equipment.

The use of low HAP containing coating and printing materials was considered for a beyond-the-floor option for new or reconstructed sources. However, as is explained above for existing sources, it was determined that some products in the coating and printing industry cannot meet certain performance characteristics with low-organic-HAP coating and printing materials.

For these reasons, we determined that requiring beyond-the-floor emission limits for new or reconstructed sources is not practicable for this subcategory.

Slashing subcategory. The MACT floors for new or reconstructed sources and existing sources in the slashing subcategory are based on pollution prevention options reflecting the use of non-HAP materials. There is no beyond-the-floor technology that could achieve a lower organic HAP content in materials as purchased than zero percent.

Dyeing and finishing subcategory. The MACT floors for new or reconstructed sources and existing sources in the dyeing and finishing subcategory represent pollution prevention options reflecting the use of low- and non-HAP materials. No beyond-the-floor technology has been identified that could achieve a lower-organic-HAP content in materials as purchased and would be applicable to all products for dyeing operations; and zero percent HAP is the lowest-organic-HAP content in materials as purchased for finishing operations that can be achieved.

How did we select the proposed standards? For existing sources in each subcategory, we based the proposed standards on the existing source MACT floor. As described earlier, we determined that beyond-the-floor options were not technically or economically feasible for all existing sources. For the same reasons, we based the proposed standards for new or reconstructed sources in each subcategory on the new source MACT floor.

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

Coating and printing subcategory. In the coating and printing subcategory, the MACT levels of control for new or reconstructed and existing sources can be achieved in several different ways. Many sources would be able to upgrade existing or install new emission control systems to comply with the MACT floor OCE. Sources using oxidizers to control organic HAP emissions with low inlet loadings may be able to comply with the oxidizer outlet organic HAP concentration limit. Some sources would be able to use low- or non-HAP coating and printing materials, or a combination of low-HAP coating and printing materials and emission control systems to comply with the emission rate limit. If a source is also using thinning or cleaning materials that contain organic HAP, then it may be able to switch to lower-HAP or non-HAP thinning and cleaning materials, which are widely available, to reduce the sourcewide organic HAP emission rate to the MACT level.

Slashing subcategory. In the slashing subcategory, sources can use readily available slashing materials that comply with the emission rate limit.

Dyeing and finishing subcategory. Sources in the dyeing and finishing subcategory can use dyeing and finishing materials that comply with the emission rate limit. If certain products require the use of higher-HAP materials, sources in the dyeing and finishing subcategory also can comply with the affected source organic HAP emission rate limit by averaging across all dyeing and/or finishing materials used.

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

Numerical emission standards are required by section 112(h) of the CAA unless we can justify that it is not feasible to prescribe or enforce an emission standard, in which case a design, equipment, work practice, or operational standard can be set.

We selected the format of the proposed standards for the coating and printing subcategory to be an overall percent reduction of emissions, taking into account both capture and control system efficiencies. Data available to us regarding the efficiency of capture and control systems used in this industry indicate that overall efficiency is typically determined by a performance test for capture systems and oxidizers and liquid-liquid material balance for solvent recovery systems. The proposed standards allow for determining OCE through a variety of mechanisms to be consistent with industry practices. We selected this format because it reflects MACT at all affected sources and allows flexibility in the method selected for achieving the percent reduction limit.

To encourage the use of low- and non-HAP materials in coating and printing operations, alternative standards based on HAP content are also proposed that will achieve HAP reductions comparable to the overall percent reduction limit. The format of the proposed alternative standards is mass of organic HAP per mass of coating solids. The performance-based nature of the proposed format would allow coating operation owners and operators flexibility in choosing any combination of means (including coating reformulation, use of lower-HAP or non-HAP materials, solvent elimination, and add-on control devices) to comply with the emission limits that is workable for their particular situations.

We selected the format of the proposed standards for the slashing and the dyeing and finishing subcategories to be mass of organic HAP per mass of materials used in the process. The format promotes a pollution prevention approach to reducing emissions from these processes and limits organic HAP emissions from the various sources of emissions without requiring a site-specific determination of the split of organic HAP between air and water and the distribution of organic HAP emissions between potential emission sources. The overall percent reduction in emissions format that we are proposing for the coating and printing subcategory is not appropriate for the slashing subcategory or the dyeing and finishing subcategory because organic HAP emission controls are not used to reduce emissions from these processes.

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

Under the options where emissions are reduced by using low- or non-HAP materials, we assume that all the organic HAP in the materials entering the affected source are volatilized (emitted). Therefore, emissions from operations occurring within the affected source (*e.g.,* mixing operations) are accounted for in the determination of total materials usage at the affected source. However, when you comply by using capture systems and add-on control devices, emissions from mixing, storage, and waste handling operations are often not routed to the add-on control devices and would not be practicable to measure for inclusion in a determination of compliance with the emission limit. Therefore, the proposed rule would require development and implementation of an emission reduction work practice plan to assure that emissions are reduced from such operations.

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

The proposed standards would allow you to choose among several methods to demonstrate compliance with the proposed standards for organic HAP: use of materials which individually contain low or no organic HAP; achieving an overall organic HAP emission rate from all materials that is less than the applicable emission rate limit; or, for coating and printing affected sources, capture systems and add-on control devices.

Materials with low- or no-organic-HAP. You would be required to document the organic HAP content of all materials and show that each is less than the applicable emission limit. You would also have to show that each thinner and each cleaning material used contains no organic HAP. You would use manufacturer's formulation data to document the organic HAP content of slashing materials and would have the option of using manufacturer's formulation data to document the organic HAP content of coating, printing, dyeing, finishing, cleaning and thinning materials.

Method 311 is the method developed by EPA for determining the mass fraction of organic HAP in coatings and has been used in surface coating NESHAP. We have not identified any other methods that provide advantages over Method 311 for use in the proposed standards.

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

Overall organic HAP emission rate. To demonstrate initial compliance for coating and printing operations using this option, you would calculate the organic HAP emission rate for one or more coating and printing operation in the affected source, based on the mass of organic HAP in all coating, printing, thinning, and cleaning materials and the mass of coating solids used during the compliance period. Similarly, for dyeing and finishing operations, you would calculate the mass of organic HAP in all dyeing, finishing and cleaning materials used during the compliance period. You would be required to demonstrate that the organic HAP emission rate does not exceed the applicable emission limit using the methods discussed previously.

Capture systems and add-on control devices. If you use a capture system and add-on control device, other than a solvent recovery device for which you conduct a liquid-liquid material balance, you would be required to conduct an initial performance test of the system to determine its OCE or oxidizer outlet organic HAP concentration. For a solvent recovery system for which you conduct a liquid-liquid material balance, you would determine the quantity of volatile matter applied and the quantity recovered during the initial compliance period to determine its OCE.

If you are demonstrating compliance with the organic HAP emission rate with add-on controls option, the OCE would be combined with the monthly mass of organic HAP in the coating, printing, thinning, and cleaning materials used to calculate the monthly HAP emission rate in kg HAP/kg of coating solids.

If you conduct a performance test, you would also determine parameter operating limits during the test. The test methods that the proposed standards would require for the performance test are required under many standards of performance for industrial surface coating sources under 40 CFR part 60 and NESHAP under 40 CFR part 63. We have not identified any other methods that provide advantages over these methods.

G. How Did We Select the Continuous Compliance Requirements?

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

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

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

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

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

You would be required to comply with the applicable requirements in the NESHAP General Provisions, subpart A of 40 CFR part 63, as described in Table 2 of the proposed subpart OOOO. We evaluated the General Provisions requirements and included those we determined to be the minimum notification, recordkeeping, and reporting necessary to ensure compliance with and effective enforcement of the proposed standards, modifying them as appropriate for the fabric and other textiles printing, coating, and dyeing industry.

I. How Did We Select the Compliance Date?

You would be allowed 3 years to comply with the final standards for existing affected sources. This is the maximum period allowed by the CAA. We believe that 3 years for compliance is necessary to allow adequate time to accommodate the variety of compliance methods that existing sources may use. Some sources in this category would need this 3-year maximum amount of time to develop and test reformulated coating, printing, dyeing and finishing materials. We want to encourage the use of these pollution prevention technologies. In addition, time would be needed to establish records management systems required for enforcement purposes. Some sources may need the time to purchase and install emission capture and control systems. In such cases, you would need to obtain a permit for the use of add-on controls, which will require time for approval from the permitting authority.

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

IV. Summary of Environmental, Energy, and Economic Impacts

The proposed standards will affect an estimated 135 major sources that perform coating, printing, slashing, dyeing and finishing operations. The impacts are presented relative to a baseline reflecting the level of control prior to the standards. Due to consolidation throughout the industry, there is expected to be little growth within the printing, coating and dyeing industry during the next 5 years. Only three new coating sources and no new printing, slashing, dyeing, or finishing sources are projected. For more information on how impacts were estimated, see the docket for the proposed rule.

A. What Are the Air Impacts?

We estimated that compliance with the proposed emission limits would result in reductions of nationwide organic HAP emissions of 4,104 tpy (3,723 Mg/yr). This represents a reduction of 60 percent from the baseline organic HAP emissions of 6,820 tpy (6,187 Mg/yr). Table 2 to this preamble gives a summary of the primary air impacts by subcategory associated with implementation of the rule as proposed.

TABLE 2.—SUMMARY OF PRIMARY AIR IMPACTS BY SUBCATEGORY FOR EXISTING SOURCES

Subcategory	Emissions before NESHAP (tpy)	Emissions after NESHAP (tpy)	Emission reduction (tpy)	Percent reduction
Coating and Printing	5,571	2,389	3,182	57
Dyeing and Finishing	901	153	748	83
Slashing	348	174	174	50
Source Category Nationwide Total	6,820	2,716	4,104	60

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 costs of adding or upgrading emission control systems; the increased cost of compliant, low-formaldehyde permanent press finishes; and the cost of performance testing emission control systems. We have assumed for this analysis that all sources with affected slashing and dyeing operations will comply through the use of reformulated slashing, dyeing, thinning, and cleaning materials, and that these materials can be utilized without the need for capital expenditures. Annual costs for meeting the monitoring, recordkeeping, and reporting requirements of the proposed rule have also been included.

To comply with the proposed standards, coating and printing affected sources that are not currently in compliance would likely use either upgraded existing emission control systems or new emission control systems. We estimated the capital and annual costs of carbon adsorbers, thermal oxidizers, catalytic oxidizers and coating rooms, using model plants based on information in our facility database. We examined the current level of control reported by each source in the database to determine control measures and associated model plant costs required to achieve compliance with the proposed emission limits. Control costs estimated for the database sources were extrapolated to nationwide totals.

The dyeing and finishing compliance options are based on the use of low-HAP materials. Qualitative information concerning pollution prevention measures gathered from stakeholder meetings and site visits indicated that there would be substantial costs incurred in reducing the formaldehyde content of permanent press resins. We used information collected from a research and marketing company and textile chemical suppliers to estimate the incremental cost to produce finished fabric, using a compliant resin versus a formaldehyde resin. The incremental cost was applied to the quantity of fabric estimated to currently be finished with non-compliant formaldehyde resins.

Performance testing costs for coating and printing sources using add-on control systems to comply with the standard include the labor hours required to conduct performance testing and monitoring on each emission capture system and add-on control device used and to develop the associated data elements for recordkeeping and reporting purposes. Recordkeeping and reporting includes all labor hours related to installing recordkeeping and reporting systems, developing SSMP, initial notification, compliance status notification, performance test notification, performance test report, materials usage tracking, training personnel, and monitoring deviations and SSMP reports and recordkeeping.

We estimate total capital costs, in 1997 dollars, for the approximately 135 existing major sources to be $18.8 million and annual costs, in 1997 dollars, to be $14.5 million. These annual costs include approximately $5.6 million associated with add-on control systems for coating and printing operations, $7.5 million in direct costs associated with finishing material usage, and $1.4 million in monitoring, reporting, and recordkeeping costs.

The only new source costs would be for the three projected new coating sources. New coating sources would not install controls beyond those required for new source review, and these controls would meet the proposed new source limit. They would incur no capital costs, and we estimate their annual costs to be a total of $13,000 to comply with the proposed rule's monitoring, recordkeeping, and reporting requirements.

C. What Are the Economic Impacts?

The Agency prepared an economic impact analysis to evaluate the impacts the proposed rule would have on the producers and consumers of fabric and other textiles coating, printing, dyeing and finishing products, and society as a whole. Overall, the analysis indicates a minimal change in the prices, production quantities, and international trade of coated, printed, dyed, and finished products.

Social costs take into account changes in behavior by producers and consumers due to the imposition of compliance costs from the proposed rule. Based on the estimated compliance costs associated with the proposed rule and the predicted changes in price and production in the affected industries, the estimated annual social cost of the proposed rule is projected to be $14.5 million (2000 dollars). It is projected that producers of coated, printed, dyed and finished fabrics would absorb $10.4 million, while the remaining $4.1 million would be passed through to consumers.

We estimate that prices for coated, printed, dyed, and finished fabrics and other textiles would increase by less than one-tenth of one percent as a result of the proposed standards. Production quantities of coated, printed, dyed, and finished fabrics and other textiles would decline by the same magnitude, one-tenth of a percent, as well.

The effects of the proposed rule on international trade of coated, printed, dyed, and finished fabric and other textiles were also estimated. Because the predicted changes in price for both coated, printed, dyed, and finished fabric and other textiles are small, trade of these products is not expected to be significantly affected. We expect that imports of both coated and finished fabrics and other textiles would increase by less than one-tenth of a percent.

For new sources, it can be reasonably assumed that the investment decision to enter the coating, printing, dyeing and finishing industry may be slightly altered as a result of the proposed rule; however, other factors will weigh more heavily in this decision. For example, current economic trends have shown a continuous decline of the textile market as more manufacturing moves abroad. Only three new coating sources are projected to come on-line in the 5 years following promulgation of the rule, and no additional printing, slashing, dyeing or fabric finishing sources are projected. The three new coating sources that are projected to come on-line would incure a total of only $13,000 in annual costs to meet the requirements of the proposed standards.

Quantified economic impacts of the proposed rule on printed, dyed, and slashed fabric products were not calculated in the economic impact analysis because the compliance costs for the sources that produce these products are minimal and relate only to monitoring, recordkeeping, and reporting activities. Based on a qualitative analysis of the printing, dyeing, and slashing markets, we have determined that the impact on the prices and quantities of these products would be insignificant. We have also determined that international trade of these products would not be significantly affected. For more information, refer to the ''Economic Impact Analysis of the Proposed Textile Coating, Printing, Dyeing and Finishing NESHAP'' in the docket for the proposed rule.

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

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

Non-air environmental and energy impacts would result from the installation of new and the upgrade of existing add-on controls by affected sources in the coating and printing subcategory. Affected sources adding carbon adsorber systems would require increased cooling water usage for the condenser used to recover organic HAP from the regenerated carbon, and in certain situations for spray towers to cool the gas entering the carbon adsorber. The estimated increase in nationwide total cooling water usage would be 70.3 million gallons per year. The cooling water is assumed not to result in wastewater. There would be a small increase in water usage for steam to regenerate carbon. The steam used to regenerate carbon yields water requiring wastewater treatment. The estimated increase in nationwide total wastewater generation would be 3.8 million gallons per year.

Affected sources using existing catalytic oxidizers to comply with the proposed emission limits probably would be required to install larger volumes of catalysts and to replace the catalysts more frequently than current replacement cycles to maintain high performance levels, resulting in a small increase in solid waste generation. Similarly, affected sources that currently do not operate emission control systems and that install catalytic oxidizers to comply with the proposed emission limits would increase solid waste generation. Sometimes the spent catalyst is regenerated by the manufacturer for reuse. Activated carbon used in carbon adsorbers is returned to the manufacturer at the end of its useful life and converted to other salable products. Little solid waste impact is expected from this source.

Energy requirements for implementation of the compliance options for coating and printing affected sources would include electricity to collect and treat ventilation air, electricity to light PTE, and natural gas to provide supplemental fuel for stable operation of oxidizers. The estimated increase in nationwide total electricity usage would be almost 2.8 million kilowatt hours per year and the estimated nationwide total natural gas usage would increase by about 195 million standard cubic feet per year.

V. Administrative Requirements

A. Executive Order 12866, Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), EPA must determine whether the regulatory action is ''significant'' and therefore subject to 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.

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

B. Executive Order 13132, Federalism

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include rules that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.'' Under Section 6 of Executive Order 13132, EPA may not issue a rule that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed rule. The EPA also may not issue a rule that has federalism implications and that preempts State law, unless the Agency consults with State and local officials early in the process of developing the proposed rule.

The proposed rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. Thus, the requirements of Section 6 of the Executive Order do not apply to the proposed rule. Although Section 6 of Executive Order 13132 does not apply to the proposed rule, EPA did consult with State and local officials to enable them to provide timely input in the development of the proposed rule.

C. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.''

The proposed rule does not have tribal implications, as specified in Executive Order 13175. No tribal governments own or operate printing, coating, and dyeing affected sources. Thus, Executive Order 13175 does not apply to the proposed rule.

The EPA specifically solicits additional comment on the proposed rule from tribal officials.

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

Executive Order 13045, ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned rule 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 rule. The proposed rule is not subject to Executive Order 13045 because it does not establish an environmental standard based on an assessment of health or safety risks. No children's risk analysis was performed because no alternative technologies exist that would provide greater stringency at a reasonable cost. Furthermore, the proposed rule has been determined not to be ''economically significant'' as defined under Executive Order 12866.

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

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

F. Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under Section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures by 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 proposed rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. The maximum total annual cost of the proposed rule for any year has been estimated to be $14.5 million. Thus, today's proposed rule is not subject to the requirements of sections 202 and 205 of the UMRA. In addition, EPA has determined that the proposed rule contains no regulatory requirements that might significantly or uniquely affect small governments because it contains no requirements that apply to such governments or impose obligations upon them. Therefore, today's proposed rule is not subject to the requirements of section 203 of the UMRA.

G. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1966 (SBREFA), 5 U.S.C. 601 et seq.

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

For the purposes of assessing the impacts of today's proposed rule on small entities, ''small entity'' is defined as: (1) A small business according to Small Business Administration (SBA) size standards by NAICS code ranging from 500 to 1,000 employees; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

We applied the definition of a small business as provided by the SBA at 13 CFR 121, and classified by the NAICS. The firms owning sources directly affected by the proposed rule are generally classified by the NAICS codes 313210 (Broadwoven Fabric Mills), 313311 (Broadwoven Fabric Finishing Mills), 313320 (Fabric Coating Mills), and 313312 (Textile and Fabric Finishing (except Broadwoven Fabric) Mills).

The SBA defines small businesses in NAICS codes 313210, 313311, and 313320 as those with fewer than 1000 employees (as described in (1) above). In NAICS code 313312, the SBA defines a small business as one with fewer than 500 employees. In the past several years, production in the textile manufacturing industry has become more capital intensive, thus utilizing smaller numbers of employees. This leads a substantial fraction of the companies in the fabric and other textiles coating, printing, finishing, dyeing, and slashing source category to be considered small businesses based on SBA's small business size standards.

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

The EPA identified 40 small companies classified as owning coating operations by NAICS 313320. Of these 40 small coating companies, 22 (55 percent) are projected to face zero compliance costs. Fifteen (37.5 percent) face costs less than 1 percent of their sales, and two (5 percent) have cost-to-sales ratios between 1 and 3 percent. Only one (2.5 percent) of these companies has a cost-to-sales ratio that exceeds 3 percent (3.2 percent). This analysis leads us to conclude that there is not a significant impact on a substantial number of small entities in the coating and printing subcategory.

For the dyeing and finishing subcategory, the engineering analysis determined that at most five finishing businesses representing seven facilities, would face positive compliance costs in order to meet the requirements specified by the proposed NESHAP. Of these five firms, we were able to identify one company as large. This means that at most four small businesses face compliance costs associated with the proposed rule.

The EPA did not possess sufficient data to identify the five finishing facilities expected to face compliance costs, so the small business analysis for finishers consisted of a sensitivity analysis of cost-to-sales ratios using minimum, mean, median, and maximum estimated compliance costs for finishing facilities. Sales data were available for 58 percent of all small business finishers EPA identified including those not subject to the rule. Using median compliance cost estimates for finishing sources, EPA found that only three companies had cost-to-sales ratios between 1 and 3 percent and none had a cost-to-sales ratio exceeding 3 percent. This analysis leads us to conclude that there is not a significant impact on a substantial number of small entities in the dyeing and finishing subcategory.

For the small and large companies that engage in dying and slashing, compliance costs are limited to monitoring, recordkeeping, and reporting costs. Based on a qualitative analysis, EPA concludes that the cost will be minimal.

Although this proposed rule will not have a substantial impact on small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities. We made an effort to identify the small businesses potentially impacted by this rule. For the coating and printing subcategory we contacted the State regulatory agency or the facility for every small business we identified. For the dyeing and finishing subcategory we determined there were few small businesses potentially impacted by the rule, but were unable to identify these facilities. We continue to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

H. Paperwork Reduction Act

The information collection requirements in the proposed rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501, *et seq.* An Information Collection Request (ICR) document has been prepared by EPA (ICR No. 2071.01) and a copy may be obtained from Sandy Farmer by mail at the Collection Strategies Division (2822), U.S. EPA, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, by e-mail at *farmer.sandy@epa.gov,* or by calling (202) 260–2740. A copy may also be downloaded off the internet at http://www.epa.gov/icr. The information requirements are not effective until OMB approves them.

The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (subpart A of 40 CFR part 63), which are mandatory for all operators subject to national emission standards. These recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to the EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to EPA policies set forth in 40 CFR part 2, subpart B.

The proposed standards would require maintaining records of all coating, printing, slashing, dyeing, finishing, thinning, and cleaning materials data and calculations used to determine compliance. This information includes the amount (kg) used during each monthly compliance period, mass fraction organic HAP, and, for coating and printing materials only, mass fraction of solids.

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

The monitoring, recordkeeping, and reporting burden for this collection (averaged over the first 3 years after the effective date of the promulgated rule) is estimated to be 213 labor hours per affected source at a total annual cost of $1.4 million. This estimate includes, for affected sources with existing or newly-installed add-on control systems, a one-time performance test and report (with repeat tests where needed), one-time submission of a SSMP with semiannual reports for any event when the procedures in the plan were not followed, semiannual compliance status reports, and recordkeeping. There are no capital/startup costs associated with the monitoring requirements.

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

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

Comments are requested on the EPA's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques. By U.S. Postal Service, send comments on the ICR to the Director, Collection Strategies Division (2822), U.S. EPA, 1200 Pennsylvania Ave., NW., Washington, DC 20460 (or by courier, send comments on the ICR to the Director, Collection Strategies Division (2822), U.S. EPA, 401 M Street, SW., Room 925H, West Tower, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th St., NW., Washington, DC 20503, marked ''Attention: Desk Officer for EPA.'' Include the ICR number in any correspondence. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after July 11, 2002, a comment to OMB is best assured of having its full effect if OMB receives it by August 12, 2002. The final rule will respond to any OMB or public comments on the information collection requirements contained in the proposed rule.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law No. 104–113, § 12(d) (15 U.S.C. 272 note), directs EPA to use voluntary consensus standards (VCS) in its regulatory and procurement activities unless to do so would be inconsistent with applicable law or otherwise impractical. The VCS are technical standards (*e.g.,* material specifications, test methods, sampling and analytical procedures, business practices) developed or adopted by one or more voluntary consensus bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency does not use available and applicable VCS.

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

The VCS ANSI/ASME PTC 19.10–1981, ''Flue and Exhaust Gas Analyses,'' is cited in the proposed rule for its manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas. This part of ANSI/ASME PTC 19.10–1981 is an acceptable alternative to Method 3B.

Six VCS: ASTM D1475–90, ASTM D2369–95, ASTM D3792–91, ASTM D4017–96a, ASTM D4457–85 (Reapproved 91), and ASTM D5403–93 are already incorporated by reference in EPA Method 24. Five VCS: ASTM D1979–91, ASTM D3432–89, ASTM D4747–87, ASTM D4827–93, and ASTM PS 9–94 are incorporated by reference in EPA Method 311.

In addition to the VCS EPA proposes to use in the proposed rule, the search for emissions monitoring procedures identified 16 other VCS. The EPA determined that ten of these 16 standards would not be practical due to lack of equivalency, detail, and/or quality assurance/quality control requirements. Therefore, we do not propose to adopt these VCS in the proposed rule. The reasons for this determination for the ten methods are discussed below.

The standard ISO 10780:1994, ''Stationary Source Emissions—Measurement of Velocity and Volume Flowrate of Gas Streams in Ducts,'' is impractical as an alternative to EPA Method 2 in the proposed rule. This standard recommends the use of L-shaped pitots, which historically have not been recommended by EPA because the S type design has large openings which are less likely to plug up with dust.

The standard ASTM D3464–96, ''Standard Test Method Average Velocity in a Duct Using a Thermal Anemometer,'' is impractical as an alternative to EPA Method 2 for the purposes of the proposed rule primarily because applicability specifications are not clearly defined, e.g., range of gas composition, temperature limits. Also, the lack of supporting quality assurance data for the calibration procedures and specifications, and certain variability issues that are not adequately addressed by the standard limit EPA's ability to make a definitive comparison of the method in these areas.

The standard EN 12619:1999, ''Stationary Source Emissions—Determination of the Mass Concentration of Total Gaseous Organic Carbon at Low Concentrations in Flue Gases—Continuous Flame Ionization Detector Method,'' is an impractical alternative to EPA Method 25A for the purposes of the proposed rule. This standard is impractical because it does not measure solvent process vapors in concentrations greater than 40 ppm carbon. A method whose upper limit is 40 ppm carbon has a measurement range too limited to be useful in measuring source emissions.

Four of the ten VCS are impractical alternatives to EPA test methods for the purposes of the proposed rule because they are too general, too broad, or not sufficiently detailed to assure compliance with EPA regulatory requirements: ASTM 3796–90 (Reapproved 1996), ''Standard Practice for Calibration of Type S Pitot Tubes,'' for EPA Method 2; ASTM D3271–87, ''Standard Practice for Direct Injection of Solvent-Reducible Paints into a Gas

Chromatograph for Solvent Analysis,'' for EPA Method 311; ASTM E337–84 (Reapproved 1996), ''Standard Test Method for Measuring Humidity with a Psychrometer (the Measurement of Wet- and Dry-Bulb Temperatures),'' for EPA Method 4; and CAN/CSA Z223.2–M86(1986), ''Method for the Continuous Measurement of Oxygen, Carbon Dioxide, Carbon Monoxide, Sulphur Dioxide, and Oxides of Nitrogen in Enclosed Combustion Flue Gas Streams,'' for EPA Method 3A.

Three of the ten VCS are impractical alternatives to EPA test methods for the purposes of the proposed rule because they lacked sufficient quality assurance and quality control requirements necessary for EPA compliance assurance requirements: ASTM D3154–91, ''Standard Method for Average Velocity in a Duct (Pitot Tube Method),'' for EPA Methods 1, 2, 2C, 3, 3B, and 4; ASTM D5835–95, ''Standard Practice for Sampling Stationary Source Emissions for Automated Determination of Gas Concentration,'' for EPA Method 3A; and ISO 10396:1993, ''Stationary Source Emissions: Sampling for the Automated Determination of Gas Concentrations,'' for EPA Method 3A.

The following six of the 16 VCS identified in this search were not available at the time the review was conducted for the purposes of the proposed rule because they are under development by a voluntary consensus body: ASME/BSR MFC 12M, ''Flow in Closed Conduits Using Multiport Averaging Pitot Primary Flowmeters,'' for EPA Method 2; ASME/BSR MFC 13M, ''Flow Measurement by Velocity Traverse,'' for EPA Method 1 (and possibly 2); ISO/DIS 11890–1 Part 1, ''Paints and Varnishes—Determination of Volatile Organic Compound (VOC) Content—Difference Method,'' for EPA Method 24; ISO/DIS 11890–2 Part 2, ''Paints and Varnishes—Determination of Volatile Organic Compound (VOC) Content—Gas Chromatographic Method,'' for EPA Method 24; ISO/DIS 12039, ''Stationary Source Emissions—Determination of Carbon Monoxide, Carbon Dioxide, and Oxygen—Automated Methods,'' for EPA Method 3A; and ISO/FDIS 14965, ''Air Quality—Determination of Total Nonmethane Organic Compounds—Cryogenic Preconcentration and Direct Flame Ionization Method,'' for EPA Method 25A and parts of Method 25. While we are not proposing to include these six VCS in today's proposal, EPA will consider the standards when final.

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

Section 63.8 of subpart A of the General Provisions allows for any State or source to apply to EPA for permission to use an alternative method in place of any of the EPA testing methods or performance standards.

List of Subjects in 40 CFR Part 63

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

Dated: June 17, 2002.

Christine Todd Whitman,

Administrator.

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

PART 63—[AMENDED]

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

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

2. Part 63 is amended by adding subpart OOOO to read as follows:

Subpart OOOO—National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles

What This Subpart Covers

Sec.

Emission Limitations

General Compliance Requirements

Notifications, Reports, and Records

Compliance Requirements for the Compliant Material Option

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

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

Compliance Requirements for the Organic HAP Overall Control Efficiency and Oxidizer Outlet Organic HAP Concentration Options

Performance Testing and Monitoring Requirements

Other Requirements and Information

Tables to Subpart OOOO of Part 63

Subpart OOOO—National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles

What This Subpart Covers

§ 63.4280 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for fabric and other textiles printing, coating and dyeing facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

§ 63.4281 Am I subject to this subpart?

(a) Except as provided in paragraph (c) of this section, the source category to which this subpart applies is the printing, coating, slashing, dyeing or finishing of fabric and other textiles, and it includes the subcategories listed in paragraphs (a)(1) through (3) of this section.

(1) The coating and printing subcategory includes any facility that coats or prints fabric or other textiles. Coating and printing operations are defined in § 63.4381. Coated and printed substrates are used in products including, but not limited to, architectural structures, apparel, flexible hoses, hot-air balloons, lightweight liners, luggage, military fabric, rainwear, sheets, tents, threads and V-belts. The coating and printing subcategory includes any fabric or other textile coating line that also performs coating on another substrate unless such coating is specifically exempted from this subpart by another NESHAP in this part.

(2) The slashing subcategory includes any facility with slashing operations as defined in § 63.4381. In the slashing process, sizing compounds are applied to warp yarn to bind the fiber together and stiffen the yarn to provide abrasion resistance during weaving.

(3) The dyeing and finishing subcategory includes any facility that dyes or finishes a fabric or other textiles. Dyeing and finishing operations are defined in § 63.4381. Dyed and finished textiles are used in a wide range of products including, but not limited to, apparel, carpets, high-performance industrial fabrics, luggage, military fabrics, outer wear, sheets, towels, and threads.

(b) You are subject to this subpart if you own or operate a new, reconstructed, or existing affected source, as defined in § 63.4282, that is a major source, is located at a major source, or is part of a major source of hazardous air pollutants (HAP). A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year or any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year.

(c) This subpart does not apply to coating, printing, slashing, dyeing, or finishing operations that meet the criteria of paragraphs (c)(1) through (3) of this section.

(1) Coating, printing, slashing, dyeing or finishing operations conducted at a source that uses only coating, printing, slashing, dyeing, finishing, thinning and cleaning materials that contain no organic HAP as determined according to § 63.4341.

(2) Coating, printing, slashing, dyeing, or finishing that occurs at research or laboratory facilities or that is part of janitorial, building, and facility maintenance operations.

(3) Coating, printing, slashing, dyeing, or finishing used by a facility and not for commerce, unless organic HAP emissions from the coating, printing, slashing, dyeing or finishing operations are as high as the major source HAP emissions specified in paragraph (b) of this section.

63.4282 What parts of my plant does this subpart cover?

(a) This subpart applies to each new, reconstructed, and existing affected source within each of the three subcategories listed in § 63.4281(a).

(b) The affected source for the coating and printing subcategory is the collection of all of the items listed in paragraphs (b)(1) through (5) of this section that are used in coating and printing operations. The regulated materials for the coating and printing subcategory are the coating, printing, thinning and cleaning materials used in the affected source.

(1) All web coating and printing equipment used to apply cleaning materials to a substrate to prepare it for coating or printing material application, to apply coating or printing materials to a substrate and to dry or cure the coating or printing materials, or to clean coating/printing operation equipment;

(2) All storage containers and mixing vessels in which coating, printing, thinning, or cleaning materials are stored or mixed;

(3) All manual and automated equipment and containers used for conveying coating, printing, thinning, or cleaning materials;

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

(5) All manual and automated equipment, structures, and/or devices(s) used to convey, treat, or dispose of wastewater streams or residuals.

(c) The affected source for the slashing subcategory is the collection of all of the items listed in paragraphs (c)(1) through (5) of this section that are used in slashing operations. The regulated materials for the slashing subcategory are the slashing materials used in the affected source.

(1) All slashing equipment used to apply and dry size on warp yarn;

(2) All storage containers and mixing vessels in which slashing materials are stored or mixed;

(3) All manual and automated equipment and containers used for conveying slashing materials;

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

(5) All manual and automated equipment, structures, and/or devices(s) used to convey, treat, or dispose of wastewater streams or residuals.

(d) The affected source for the dyeing and finishing subcategory is the collection of all of the items listed in paragraphs (d)(1) through (5) of this section that are used in dyeing and finishing operations. The regulated materials for the dyeing and finishing subcategory are the dyeing, finishing and cleaning materials used in the affected source.

(1) All dyeing and finishing equipment used to apply dyeing or finishing materials, to fix dyeing materials to the substrate, to rinse the textile substrate, to dry or cure the dyeing or finishing materials, or to clean dyeing/finishing operation equipment;

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

(3) All manual and automated equipment and containers used for conveying dyeing, finishing or cleaning materials;

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

(5) All manual and automated equipment, structures, and/or devices(s) used to convey, treat, or dispose of wastewater streams or residuals.

(e) An affected source is a new source if it meets the criteria in paragraph (e)(1) of this section and the criteria in either paragraph (e)(2) or (3) of this section.

(1) You commenced the construction of the source after July 11, 2002, by installing new coating, printing, slashing, dyeing, or finishing equipment.

(2) The new coating, printing, slashing, dyeing or finishing equipment is used at a source where no coating, printing, slashing, dyeing or finishing was previously performed.

(3) The new coating, printing, slashing, dyeing and finishing equipment is used in a subcategory in which no equipment was previously used.

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

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

§ 63.4283 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 §§ 63.4340, 63.4350, 63.4360, and 63.4365.

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

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

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

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

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

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

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

(d) You must meet the notification requirements in § 63.4310 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

§ 63.4290 What emission limits must I meet?

You must meet the emission limit for the subcategory or subcategories present in your facility. The three subcategories are: coating and printing, slashing, and dyeing and finishing. Table 1 to this subpart presents the emission limits for a new or reconstructed affected source and for an existing affected source in each subcategory.

§ 63.4291 What are my options for meeting the emission limits?

You must include all regulated materials (as defined in § 63.4381) used in the affected source when determining whether the organic HAP emission rate is equal to or less than the applicable emission limit in Table 1 to this subpart. To make this determination, you must use at least one of the compliance options for the subcategory listed in paragraphs (a) through (c) of this section.

(a) *Coating and printing.* You may apply any one of the compliance options in paragraphs (a)(1) through (5) of this section to an individual coating/printing operation or to multiple coating/printing operations in the affected source as a group or to the entire affected source in the coating and printing subcategory. You may use different compliance options for different coating/printing operations or at different times on the same coating/printing operation. However, you may not use different compliance options at the same time on the same coating/printing operation. If you switch between compliance options for any coating/printing operation or group of operations, you must document this switch as required by § 63.4330(c), and you must report it in the next semiannual compliance report required in § 63.4320.

(1) *Compliant material option.* Demonstrate that the organic HAP content of each coating and printing material used in the coating/printing operation(s) is less than or equal to the applicable emission limit in Table 1 to this subpart, and that each thinning and cleaning material used contains no organic HAP. You must meet all the requirements of §§ 63.4340, 63.4341, and 63.4342 to demonstrate compliance with the applicable emission limit using this option.

(2) *Emission rate without add-on controls option.* Demonstrate that, based on the regulated materials used in the coating/printing operation(s), the organic HAP emission rate for the coating/printing operation(s) is less than or equal to the applicable emission limit in Table 1 to this subpart, calculated as a monthly emission rate. You must meet all the requirements of §§ 63.4350, 63.4351, and 63.4352 to demonstrate compliance with the applicable emission limit using this option.

(3) *Emission rate with add-on controls option.* Demonstrate that, based on the regulated materials used in the coating/printing operation(s) and the organic HAP emissions reductions achieved by emission capture systems and add-on controls, the organic HAP emission rate for the coating/printing operation(s) is less than or equal to the applicable emission limit in Table 1 to this subpart, calculated as a monthly emission rate. If you use this compliance option, you must also demonstrate that all capture systems and control devices for the coating/printing operation(s) meet the operating limits required in § 63.4292, except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4361(d)(5), and that you meet the work practice standards required in § 63.4293. You must meet all the requirements of §§ 63.4360 through 63.4363 and §§ 63.4370 through 63.4374 to demonstrate compliance with the emission limits, operating limits, and work practice standards using this option.

(4) *Organic HAP overall control efficiency option.* Demonstrate that,

based on the organic HAP emission capture and add-on control efficiencies achieved, the organic HAP overall control efficiency is greater than or equal to the applicable organic HAP overall control efficiency limit in Table 1 to this subpart. If you use this compliance option, you must also demonstrate that all capture systems and control devices for the coating/printing operation(s) meet the operating limits required in § 63.4292, except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4361(d)(5), and that you meet the work practice standards required in § 63.4293. You must meet all the requirements of §§ 63.4365 through 63.4368 and §§ 63.4370 through 63.4374 to demonstrate compliance with the applicable emission limits, operating limits, and work practice standards using this option.

(5) *Oxidizer outlet organic HAP concentration limit.*

If you use an oxidizer to control organic HAP emissions, demonstrate that the oxidizer is operated such that the outlet organic HAP concentration is no greater than 20 parts per million by volume (ppmv) on a dry basis, and the efficiency of the capture system is 100 percent. If you use this compliance option, you must also demonstrate that all capture systems and oxidizers for the coating/printing operation(s) meet the operating limits required in § 63.4292, and that you meet the work practice standards required in § 63.4293. You must meet all the requirements of §§ 63.4365 through 63.4368 and §§ 63.4370 through 63.4374 to demonstrate compliance with the applicable emission limits, operating limits, and work practice standards using this option.

(b) *Slashing.* You must use the compliant material option to demonstrate that the mass fraction of organic HAP in each slashing material used in the slashing operation(s) is less than or equal to the applicable emission limit in Table 1 to this subpart. You must meet all the requirements of §§ 63.4340, 63.4341, and 63.4342 to demonstrate compliance with the applicable emission limit.

(c) *Dyeing and finishing.* You may apply either of the compliance options in paragraphs (c)(1) and (2) of this section to an individual dyeing/finishing operation or to multiple dyeing/finishing operations in the affected source as a group or to the entire affected source in the dyeing and finishing subcategory. You may use different compliance options for different dyeing/finishing operations or at different times on the same dyeing/finishing operation. However, you may not use different compliance options at the same time on the same dyeing/finishing operation. If you switch between compliance options for any dyeing/finishing operation or group of operations, you must document this switch as required by § 63.4330(c), and you must report it in the next semiannual compliance report required in § 63.4320.

(1) *Compliant material option.* Demonstrate that the mass fraction of organic HAP in each dyeing, finishing, and cleaning material used in the dyeing/finishing operation(s) is less than or equal to the applicable emission limit in Table 1 to this subpart. You must meet all the requirements of §§ 63.4340, 63.4341, and 63.4342 to demonstrate compliance with the applicable emission limit using this option.

(2) *Emission rate without add-on controls option.* Demonstrate that, based on the dyeing, finishing, and cleaning materials used in the dyeing/finishing operation(s), the organic HAP emission rate for the dyeing operation(s), the organic HAP emission rate for the finishing operation(s) or the combined organic HAP emission rate for dyeing and finishing is less than or equal to the applicable emission limit(s) in Table 1 to this subpart, calculated as a monthly emission rate. You must meet all the requirements of §§ 63.4350, 63.4351, and 63.4352 to demonstrate compliance with the applicable emission limit(s) using this option.

§ 63.4292 What operating limits must I meet?

(a) For any coating/printing operation, slashing operation, or dyeing/finishing operation on which you use the compliant material option or coating/printing operation or dyeing/finishing operation on which you use the emission rate without add-on controls option, you are not required to meet any operating limits.

(b) For any controlled coating/printing operation on which you use the emission rate with add-on controls option, the organic HAP overall control efficiency option, or the oxidizer outlet organic HAP concentration option, except those for which you use a solvent recovery system and conduct a liquid-liquid material balance according to § 63.4361(d)(5), you must meet the operating limits specified in Table 2 of this subpart. These operating limits apply to the emission capture and control systems on the coating/printing operation(s) for which you use this option, and you must establish the operating limits during the performance test according to the procedures in § 63.4367. 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 2 of this subpart, or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of alternative monitoring under § 63.8(f).

§ 63.4293 What work practice standards must I meet?

(a) For any slashing operation or dyeing/finishing operation, you are not required to meet any work practice standards. For any coating/printing 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 either the emission rate with add-on controls option, the organic HAP overall control efficiency option, or the oxidizer outlet organic HAP concentration option for a coating/printing operation, you must develop and implement a work practice plan to minimize organic HAP emissions from the storage, mixing, and conveying of coating, printing, thinning, and cleaning materials used in, and waste materials generated by, the coating/printing operations 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 coating, printing, thinning, cleaning, and waste materials must be stored in closed containers.

(2) Spills of organic-HAP-containing coating, printing, thinning or cleaning materials, and waste materials must be minimized.

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

(4) Mixing vessels which contain organic-HAP-containing coating, printing, thinning 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, EPA, may choose to grant you permission to use an alternative to the work practice standards in this section.

General Compliance Requirements

§ 63.4300 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) Each affected source must be in compliance with the applicable emission limit in Table 1 to this subpart at all times.

(2) Any coating/printing operation for which you use either the emission rate with add-on controls option, as specified in § 63.4291(a)(3), the organic HAP overall control efficiency option, as specified in § 63.4291(a)(4), or the oxidizer outlet organic HAP concentration option, as specified in § 63.4291(a)(5), must be in compliance with the emission limitations as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) The coating/printing operations must be in compliance with the applicable emission limit in Table 1 to this subpart at all times.

(ii) Each controlled coating/printing operation must be in compliance with the operating limits for emission capture systems and add-on control devices required by § 63.4292 at all times except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4361(h).

(iii) Each controlled coating/printing operation must be in compliance with the work practice standards in § 63.4293 at all times.

(b) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, 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/printing operation equipment that may cause increased emissions or that would affect capture efficiency if the process equipment malfunctions, such as conveyors that move the substrate among enclosures.

§ 63.4301 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

Notifications, Reports, and Records

§ 63.4310 What notifications must I submit?

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

(b) *Initial Notification.* You must submit the Initial Notification required by § 63.9(b) for a new or reconstructed affected source no later than 120 days after initial startup or 120 days after [DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], whichever is later. For an existing affected source, you must submit the Initial Notification no later than 1 year after [DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**].

(c) *Notification of Compliance Status.* You must submit the Notification of Compliance Status required by § 63.9(h) no later than 30 calendar days following the end of the initial compliance period described in § 63.4340, § 63.4350, or § 63.4360 that applies to your affected source. The Notification of Compliance Status must contain the information specified in paragraphs (c)(1) through (9) of this section and in § 63.9(h).

(1) Company name and address.

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

(3) Date of the report and beginning and ending dates of the reporting period. The reporting period is the initial compliance period described in § 63.4340, § 63.4350, § 63.4360, or § 63.4365 that applies to your affected source.

(4) Identification of the compliance option or options specified in § 63.4291 that you used during the initial compliance period on each coating/printing operation in each coating/printing affected source, on each slashing operation in each slashing affected source, and on each dyeing/finishing operation in each dyeing/finishing affected source.

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

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

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

(ii) If you failed to meet the applicable emission limit in Table 1 to this subpart, include all the calculations you used to determine the kilogram (kg) organic HAP emitted per kg of solids used in coating and printing material or the weight percent organic HAP compounds in slashing, dyeing or finishing material to demonstrate your failure to meet the applicable emission limit. 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 (iii) of this section that is required by the compliance option(s) you used to demonstrate compliance with the emission limit, include an example of how you determined the value, including calculations and supporting data. Supporting data can include a copy of the information provided by the supplier or manufacturer of the example regulated material or a summary of the results of testing conducted according to § 63.4341(a), (b), or (c). You do not need to submit copies of any test reports.

(i) Mass fraction of organic HAP and mass fraction of solids for one coating or printing formulation including thinning materials, mass fraction of organic HAP for one cleaning material and mass fraction of organic HAP for all of the regulated materials ‘‘as purchased’’ used in one slashing operation or dyeing/ finishing operation.

(ii) Mass of coating or printing formulation used in coating/printing operation or of regulated materials used in slashing or dyeing/finishing operation during the compliance period.

(iii) 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 § 63.4351.

(8) The calculation of kg organic HAP per kg of coating and printing solids used and of kg organic HAP per kg of dyeing and finishing material ‘‘as purchased’’ for the compliance option(s) you use, as specified in paragraphs (c)(8)(i) through (iv) of this section.

(i) For the compliant material option as specified in § 63.4291(a)(1) for coating/printing operations and § 63.4291(c)(1) for dyeing/finishing operations, provide an example calculation of the organic HAP content for one coating and one printing material, or for one dyeing and one finishing material, as appropriate, using Equation 1 of § 63.4341.

(ii) For the emission rate without add-on controls options as specified in § 63.4291(a)(2) for coating/printing operations, provide the calculation of the total mass of organic HAP emissions; the calculation of the total mass of coating and printing solids used; and the calculation of the organic

HAP emission rate, using Equations 1, 2, and 3, respectively, of § 63.4351.

(iii) For the emission rate without add-on controls option as specified in § 63.4291(b)(2) for dyeing/finishing operations, provide the calculation of the total mass of organic HAP emissions; the calculation of the total mass of dyeing, finishing, and cleaning materials used; and the calculation of the organic HAP emission rate, using Equations 5, 6, and 7, respectively, of § 63.4351.

(iv) For the emission rate with add-on controls option as specified in § 63.4291(a)(3), provide the calculation of the total mass of organic HAP emissions before add-on controls using Equation 1 of § 63.4351, and the calculation of the organic HAP emission rate using Equation 5 of § 63.4361.

(9) For the emission rate with add-on controls option as specified in § 63.4291(a)(3), the organic HAP overall control efficiency option as specified in § 63.4291(a)(4), and the oxidizer outlet organic HAP concentration option as specified in § 63.4291(a)(5), for each controlled coating/printing 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 according to § 63.4361(d)(5), you must include the information specified in paragraphs (c)(9)(i) through (iv) of this section.

(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. If you are demonstrating compliance with the oxidizer outlet organic HAP concentration option, the emission capture system must be a PTE. 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 § 63.4293 and the startup, shutdown and malfunction plan required by § 63.4300.

§ 63.4320 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 of this section may be satisfied by reports required under other parts of the Clean Air Act (CAA), as specified in paragraph (a)(2) of this section.

(1) *Dates.* Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must prepare and submit each semiannual compliance report according to the dates specified in paragraphs (a)(1)(i) through (iv) of this section.

(i) The first semiannual compliance report must cover the first semiannual reporting period which begins the day after the end of the initial compliance period described in § 63.4340, § 63.4350, § 63.4360, or § 63.4365 that applies to your affected source and ends on June 30 or December 31, whichever date is the first date at least 6 months after 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)(3) of this section.

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

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

(i) Company name and address.

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

(iii) Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31.

(iv) Identification of the compliance option or options specified in § 63.4291 that you used on each coating/printing operation, slashing operation, and dyeing/finishing operation during the reporting period. If you switched between compliance options during the reporting period, you must report the beginning and ending dates you used each option.

(v) If you used the emission rate without add-on controls, the emission rate with add-on controls, or the organic HAP overall control efficiency compliance option (§ 63.4291(a)(2), (3), or (4)), the calculation results for each month during the 6-month reporting period.

(4) *No deviations.* If there were no deviations from the emission limitations in Table 1 to this subpart, § 63.4292, and § 63.4293 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 use the emission rate with add-on controls option, the organic HAP overall control efficiency option, or the oxidizer outlet organic HAP concentration 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 use the compliant material option, and there was a deviation from the applicable HAP content requirements in Table 1 to this subpart, the semiannual compliance report must contain the information in paragraphs (a)(5)(i) through (iv) of this section.

(i) Identification of each coating, printing, slashing, dyeing or finishing material used that deviated from the emission limit, each cleaning material used in dyeing/finishing operations that deviated from the emission limit, and each thinning or cleaning material used in coating/printing operations that contained organic HAP, and the dates and time periods each was used.

(ii) The calculation of the organic HAP content using Equation 1 of § 63.4341 for each regulated 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).

(iii) The determination of mass fraction of organic HAP for each regulated 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 use the emission rate without add-on controls option and there was a deviation from the applicable emission limit in Table 1 to this subpart, the semiannual compliance report must contain the information in paragraphs (a)(6)(i) through (iii) of this section.

(i) The beginning and ending dates of each compliance period during which the organic HAP emission rate exceeded the applicable 1-month emission limit in Table 1 to this subpart.

(ii) The calculations used to determine the 1-month organic HAP emission rate for the compliance period in which the deviation occurred. You must submit the calculations for Equations 1, 1A and 1B, 2, 3, and 4 in § 63.4351, and if applicable, the calculation used to determine mass of organic HAP in waste materials according to § 63.4351(a)(3)(iii) or (b)(3)(ii). 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: add-on controls options.* If you use one of the add-on controls options in § 63.4291(a) 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 (xv) of this section. This includes periods of startup, shutdown, and malfunction during which deviations occurred.

(i) The beginning and ending dates of each compliance period during which the organic HAP emission rate exceeded the applicable 1-month emission limit in Table 1 to this subpart.

(ii) If you use the emission rate option, the calculations used to determine the 1-month organic HAP emission rate for each compliance period in which a deviation occurred. You must submit the calculations that apply to you, including Equations 1, 1A and 1B, 2, 3, and 4 of § 63.4351; Equations 1, 1A and 1B, 3, and 5 of § 63.4361; and Equation 4 of § 63.4361. 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) If you use the organic HAP overall control efficiency option, the calculations used to determine the 1-month organic HAP overall control efficiency for each compliance period in which a deviation occurred. You must submit the calculation of organic HAP overall control efficiency using Equation 3A of § 63.4361 for a solvent recovery system for which you conduct a liquid-liquid material balance according to § 63.4361(d)(5), or Equation 6 of § 63.4361 for an emission capture system and add-on control device other than a solvent recovery system for which you conduct a liquid-liquid material balance according to § 63.4361(d)(5). You do not need to submit the background data supporting these calculations (e.g., test reports).

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

(v) A brief description of the CPMS.

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

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

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

(ix) The date and time period of each deviation from an operating limit in Table 2 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.

(x) A summary of the total duration of each deviation from an operating limit in Table 2 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.

(xi) A breakdown of the total duration of the deviations from the operating limits in Table 2 to this subpart and bypasses of the add-on control device during the semiannual reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(xii) 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.

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

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

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

(b) *Performance test reports.* If you use one of the add-on control options in § 63.4291(a), 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 use one of the add-on control options in § 63.4291(a) and you have 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.

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

§ 63.4330 What records must I keep?

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

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

(b) A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data or test data used to determine the mass fraction of organic HAP for coating, printing, slashing, dyeing, finishing, thinning, and cleaning materials; and the mass fraction of solids for coating and printing materials. If you conducted testing to determine mass fraction of organic HAP, of coating, printing, slashing, dyeing and finishing materials or the mass fraction of solids of coating or printing materials, 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 paragraph (c)(1) for coating/printing operations and the records specified in paragraph (c)(2) for dyeing/finishing operations.

(1) A record of the coating/printing operations on which you used each compliance option and the time periods (beginning and ending dates) you used each option. For each month, a record of all required calculations for the compliance option(s) you used, as specified in paragraphs (c)(1)(i) through (iv) of this section.

(i) For the compliant material option, a record of the calculation of the organic HAP content for each coating and printing material, using Equation 1 of § 63.4341.

(ii) For the emission rate without add-on controls option, a record of the calculation of the total mass of organic HAP emissions for the coating, printing, thinning and cleaning materials used each month using Equations 1, 1A, and 1B of § 63.4351 and, if applicable, the calculation used to determine the mass of organic HAP in waste materials according to § 63.4351(a)(3)(iii); the calculation of the total mass of the solids contained in all coating and printing materials used each month using Equation 2 of § 63.4351; and the calculation of each 1-month organic HAP emission rate using Equation 3 of § 63.4351.

(iii) For the emission rate with add-on controls option, a record of the calculation of the total mass of organic HAP emissions for the coating, printing, thinning and cleaning materials used each month using Equations 1, 1A, and 1B of § 63.4351 and, if applicable, the calculation used to determine the mass of organic HAP in waste materials according to § 63.4351(a)(3)(iii); the calculation of the total mass of the solids contained in all coating and printing materials used each month using Equation 2 of § 63.4351; the calculation of the mass of organic HAP emission reduction by emission capture systems and add-on control devices using Equations 1 and 1A and 1B of § 63.4361 and Equations 3 and 4 of § 63.4361, as applicable; and the calculation of each month's organic HAP emission rate using Equation 5 of § 63.4361.

(iv) For the organic HAP overall control efficiency option or the oxidizer outlet organic HAP concentration option, the records specified in paragraph (j) of this section.

(2) A record of the dyeing/finishing operations on which you used each compliance option and the time periods (beginning and ending dates) you used each option. For each month, a record of all required calculations for the compliance option(s) you used, as specified in paragraphs (c)(2)(i) and (ii) of this section.

(i) For the compliant material option, a record of the calculation of the mass fraction of organic HAP for each dyeing, finishing, and cleaning material, according to § 63.4341(h)(1).

(ii) For the emission rate without add-on controls option, the calculation for the total mass of organic HAP emissions for the dyeing, finishing and cleaning materials used each month using Equations 4 and 4A of § 63.4351 and, if applicable, the calculation used to determine the mass of organic HAP in waste materials according to § 63.4351(a)(3)(iii); the calculation of the total mass of dyeing, finishing, and cleaning materials used each month using Equation 5 of § 63.4351; and the calculation of each 1-month organic HAP emission rate using Equation 6 of § 63.4351.

(d) A record of the name and mass of each coating, printing, dyeing, finishing, thinning and cleaning material used during each compliance period. If you are using the compliant material option for all regulated materials at the source, you may maintain purchase records for each material used rather than a record of the mass used.

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

(f) A record of the mass fraction of coating and printing solids for each coating and printing material used during each month.

(g) If you use an allowance in Equation 1 or 4 of § 63.4351 for organic HAP contained in waste materials sent to or designated for shipment to a treatment, storage, and disposal facility (TSDF) according to § 63.4351(a)(3)(iii) or (b)(3)(ii), you must keep records of the information specified in paragraphs (g)(1) through (3) of this section.

(1) The name and address of each TSDF to which you sent waste materials for which you used an allowance in Equation 1 or 4 of § 63.4345, 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/printing or dyeing/finishing 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 or 4, respectively, of § 63.4351.

(3) The methodology used in accordance with § 63.4351(a)(3)(iii) or (b)(3)(ii) 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.

(h) [Reserved]

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

(j) If you use the emission rate with add-on controls option, the organic HAP overall control efficiency option, or the oxidizer outlet organic HAP concentration option, you must keep the records specified in paragraphs (i)(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 2 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 § 63.4371(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 §§ 63.4370 and 63.4371(b) through (e) including the records specified in paragraphs (j)(5)(i) through (iii) of this section that apply to you.

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

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

(iii) *Records for an alternative protocol.* Records needed to document a capture efficiency determination using an alternative method or protocol as specified in § 63.4371(e), if applicable.

(6) The records specified in paragraphs (j)(6)(i) and (ii) of this section for each add-on control device organic HAP destruction or removal efficiency determination or oxidizer outlet organic HAP concentration determination as specified in § 63.4372.

(i) Records of each add-on control device performance test conducted according to §§ 63.4370 and 63.4372.

(ii) Records of the coating/printing 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 § 63.4373 and to document compliance with the operating limits as specified in Table 2 to this subpart.

(8) A record of the work practice plan required by § 63.4293 and documentation that you are implementing the plan on a continuous basis.

§ 63.4331 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

§ 63.4340 By what date must I conduct the initial compliance demonstration?

You must complete the compliance demonstration for the initial compliance period according to the requirements in § 63.4341. The initial compliance period begins on the applicable compliance date specified in § 63.4283 and ends on the last day of the first full month after the compliance date. The initial compliance demonstration includes the calculations according to § 63.4341 and supporting documentation showing that during the initial compliance period, the organic HAP content of each coating and printing material you used and the mass fraction of organic HAP in each slashing, dyeing, finishing, and cleaning material you used did not exceed the applicable limit in Table 1 to this subpart, and documentation that you used no thinners or cleaners in coating/printing operations that contained organic HAP according to § 63.4341(h).

§ 63.4341 How do I demonstrate initial compliance with the emission limitations?

(a) You may use the compliant material option for any individual coating/printing operation, for any group of coating/printing operations in the affected source, or for all the coating/printing operations in the affected source. You must use either the emission rate without add-on controls option, the emission rate with add-on controls option, the organic HAP overall control efficiency option, or the oxidizer outlet organic HAP concentration option for any coating/printing operation(s) in the affected source for which you do not use this option. For a coating/printing affected source to demonstrate initial compliance using the compliant material option, the coating/printing operation or group of coating/printing operations must use no coating or printing material with an organic HAP content that exceeds the applicable emission limit in Table 1 to this subpart and must use no thinning or cleaning material that contains organic HAP, as determined according to this section.

(b) You must use the compliant material option for each slashing affected source, as required in Table 1 to this subpart. For a slashing affected source to demonstrate initial compliance using the compliant material option, the slashing operation or group of slashing operations must use no slashing material with a mass fraction of organic HAP that exceeds the applicable emission limit in Table 1 to this subpart.

(c) You may use the compliant material option for any individual dyeing/finishing operation, for any group of dyeing/finishing operations in the affected source, or for all the dyeing/finishing operations in the affected source. You must use the emission rate without add-on controls option for any dyeing/finishing operations in the affected source for which you do not use this option. For a dyeing/finishing affected source to demonstrate initial compliance using the compliant material option, the dyeing/finishing operation or group of dyeing/finishing operations must use no dyeing, finishing, or cleaning material with a mass fraction of organic HAP that exceeds the applicable emission limit in Table 1 to this subpart.

(d) Any coating/printing operation, slashing operation, or dyeing/finishing operation for which you use the compliant material option is not required to meet the operating limits or work practice standards required in §§ 63.4292 and 63.4293, respectively.

(e) To demonstrate initial compliance with the emission limitations using the compliant material option, you must meet all the requirements of this section for any coating/printing operation, slashing operation, or dyeing/finishing operation using this option. Use the procedures in this section on each regulated material in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration. You do not need to redetermine the HAP content of regulated materials that are reclaimed onsite and reused in the coating/printing operation, slashing operation, or dyeing/finishing operation for which you use the compliant material option, provided these regulated materials in their condition as received were demonstrated to comply with the compliant material option.

(1) *Determine the mass fraction of organic HAP for each material used.* You must determine the mass fraction of organic HAP for each regulated material used during the compliance period by using one of the options in paragraphs (e)(1)(i) through (v) of this section.

(i) *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 (e)(1)(i) and (ii) of this section when performing a Method 311 test.

(A) 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 don't 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).

(B) 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).

(ii) *Method 24 (appendix A to 40 CFR part 60).* For coating, printing, dyeing and finishing material, 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.

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

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

(v) *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 4 or 5 to this subpart. If you use the tables, you must use the values in Table 4 for all solvent blends that match Table 4 entries, and you may only use Table 5 if the solvent blends in the materials you use do not match any of the solvent blends in Table 4 and you only know whether the blend is aliphatic or aromatic. However, if the results of a Method 311 test indicate higher values than those listed on Table 4 or 5 to this subpart, the Method 311 results will take precedence.

(2) *Determine the mass fraction of solids for each coating and printing material.* You must determine the mass fraction of solids (kg of solids per pound (lb) of coating or printing material) for each coating and printing material used during the compliance period by a test or by information provided by the supplier or the manufacturer of the material, as specified in paragraphs (e)(2)(i) through (iii) of this section. If test results obtained according to paragraph (e)(2)(i) or (ii) of this section do not agree with the information obtained under paragraph (e)(2)(iii) of this section, the test results will take precedence.

(i) *Method 24 (appendix A to 40 CFR part 60).* You may use Method 24 for determining the mass fraction of solids of coating and printing materials.

(ii) *Alternative method.* You may use an alternative test method for determining solids content of each coating and printing material once the Administrator has approved it. You must follow the procedure in § 63.7(f) to submit an alternative test method for approval.

(iii) *Information from the supplier or manufacturer of the material.* You may obtain the mass fraction of solids for each coating and printing material from the supplier or manufacturer. If there is disagreement between such information and the test method results, then the test method results will take precedence.

(3) *Calculate the organic HAP content of each coating or printing material.* Calculate the organic HAP content, kg organic HAP per kg of solids used, of each coating and printing material used during the compliance period, using Equation 1 of this section:

$$H_c = \left(W_c\right)/\left(W_f\right) \qquad \text{(Eq. 1)}$$

Where:

H_c = organic HAP content of the coating or printing material, kg organic HAP per kg solids used in the coating or printing material.

W_c = mass fraction of organic HAP in the coating or printing material, kg organic HAP per kg material, determined according to paragraph (e)(1) of this section.

W_f = mass fraction of solids in coating or printing material, kg solids per kg of coating or printing material, determined according to paragraph (e)(2) of this section.

(4) *Compliance demonstration.* The calculated organic HAP content for each coating and printing material used during the initial compliance period must be less than or equal to the applicable emission limit in Table 1 to this subpart, and each thinning and cleaning material used during the initial compliance period must contain no organic HAP according to paragraph (e)(1) of this section. The mass fraction of organic HAP for each slashing, dyeing and finishing material used during the initial compliance period and cleaning material used in dyeing/finishing operations during the initial compliance period, determined according to paragraph (e)(1) of this section, must be less than or equal to the applicable emission limit in Table 1 to this subpart. You must keep all records required by §§ 63.4330 and 63.4331. As part of the Notification of Compliance Status required in § 63.4310, you must:

(i) Identify any coating/printing operation, slashing operation, and dyeing/finishing operation for which you used the compliant material option;

(ii) Submit a statement that the coating/printing operation(s) was (were) in compliance with the emission limitations during the initial compliance period because you used no coating and printing material for which the organic HAP content exceeds the applicable emission limit in Table 1 to this subpart, and you used no thinning materials or cleaning materials that contained organic HAP, determined according to paragraph (h)(1) of this section; and

(iii) Submit a statement that the slashing operation(s) and dyeing/finishing operation(s) was (were) in compliance with the emission limitations during the initial compliance period because you used no slashing, dyeing and finishing material for which the mass fraction of organic HAP exceeds the applicable emission limit in Table 1 to this subpart, and you used no cleaning materials in the dyeing/finishing affected source for which the mass fraction of organic HAP exceeds the applicable emission limit in Table 1 to this subpart, determined according to the requirements of § 63.4341(e)(1).

§ 63.4342 How do I demonstrate continuous compliance with the emission limitations?

(a) For each compliance period, to demonstrate continuous compliance, you must use no coating or printing material for which the organic HAP content determined using Equation 1 of § 63.4341, exceeds the applicable emission limit in Table 1 to this subpart. For each compliance period, you must use no slashing material, dyeing or finishing material, or cleaning material in dyeing/finishing operations for which the mass fraction of organic HAP, determined according to the requirements of § 63.4341(e)(1), exceeds the applicable emission limit in Table 1 to this subpart. For each compliance period, you must use no thinning or cleaning materials in a coating/printing affected source that contain organic HAP, determined according to the requirements of § 63.4341(e)(1). Each month following the initial compliance period described in § 63.4340 is a compliance period.

(b) If you choose to comply with the emission limitations by using the compliant material option, the use of any regulated 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 §§ 63.4310(c)(6) and 63.4320(a)(5).

(c) As part of each semiannual compliance report required by § 63.4320, you must identify any coating/printing operation, slashing operation, or dyeing/or finishing operation for which you used the compliant material option. If there were no deviations from the applicable emission limit in Table 1 to this subpart, submit a statement that, as appropriate, the coating/printing operations were in compliance with the emission limitations during the reporting period because you used no coating or printing material for which the organic HAP content exceeded the applicable emission limit in Table 1 to this subpart, and you used no thinning or cleaning materials in a coating/printing affected source that contained organic HAP, determined according to § 63.4341(e)(1), and that the slashing and dyeing/finishing operations were in compliance with the emission limitations during the reporting period because you used no slashing, dyeing or finishing material, or cleaning material in dyeing/finishing operations for which the mass fraction of organic HAP exceeded the applicable emission limit in Table 1 to this subpart.

(d) You must maintain records as specified in §§ 63.4330 and 63.4331.

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

§ 63.4350 By what date must I conduct the initial compliance demonstration?

You must complete the compliance demonstration for the initial compliance period according to the requirements of § 63.4351. The initial compliance period begins on the applicable compliance date specified in § 63.4283 and ends on the last day of the first full month after the compliance date. The initial compliance demonstration includes the calculations according to § 63.4351 and supporting documentation showing that for coating/printing operations, the organic HAP emission rate for the initial compliance period was equal to or less than the applicable emission limit in Table 1 to this subpart and for dyeing/finishing operations, the mass fraction of organic HAP for the initial compliance period was less than or equal to the applicable emission limit in Table 1 to this subpart.

§ 63.4351 How do I demonstrate initial compliance with the emission limitations?

(a) For coating/printing operations, you may use the emission rate without add-on controls option for any individual coating/printing operation, for any group of coating/printing operations in the affected source, or for all the coating/printing operations as a group in the affected source. You must use either the compliant material option, the emission rate with add-on controls option, the organic HAP overall control efficiency option, or the oxidizer outlet organic HAP concentration option for any coating/printing 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/printing operation or group of coating/printing operations must meet the applicable emission limit in Table 1 to this subpart but is not required to meet the operating limits or work practice standards in §§ 63.4292 and 63.4293, respectively. You must meet all the requirements of this section to demonstrate initial compliance with the applicable emission limit in Table 1 to this subpart for the coating/printing operation(s). When calculating the organic HAP emission rate according to this section, do not include any coating, printing, thinning or cleaning materials used on coating/printing operations for which you use the compliant material option, the emission rate with add-on controls option, the organic HAP overall control efficiency option, or the oxidizer outlet organic HAP concentration option.

(1) *Determine the mass fraction of organic HAP for each material used.* Determine the mass fraction of organic HAP for each coating, printing, thinning and cleaning material used during the compliance period according to the requirements in § 63.4341(e)(1).

(2) *Determine the mass fraction of solids for each material used.* Determine the mass fraction of solids (kg of solids per kg of coating or printing material) for each coating and printing material used during the compliance period according to the requirements in § 63.4341(e)(2).

(3) *Determine the mass of each material used.* Determine the mass (kg) of each coating, printing, thinning or cleaning material used during the compliance period by measurement or usage records.

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

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

Where:

H_e = total mass of organic HAP emissions during the compliance period, kg.
A = total mass of organic HAP in the coating and printing materials used during the compliance period, kg, as calculated in Equation 1A of this section.
B = total mass of organic HAP in the thinning and cleaning materials used during the compliance period, kg, as calculated in Equation 1B 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 (a)(4)(iii) of this section. (You may assign a value of zero to R_w if you do not wish to use this allowance.)

(i) Calculate the kg organic HAP in the coating and printing materials used during the compliance period using Equation 1A of this section:

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

Where:

A = total mass of organic HAP in the coating and printing materials used during the compliance period, kg.
$M_{c,i}$ = total mass of coating or printing material, i, used during the compliance period, kg.
$W_{c,i}$ = mass fraction of organic HAP in coating or printing material, i, kg organic HAP per kg of material.
m = number of different coating and printing, materials used during the compliance period.

(ii) Calculate the kg of organic HAP in the thinning and cleaning materials used during the compliance period using Equation 1B of this section:

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

Where:

B = total mass of organic HAP in the thinning and cleaning materials used during the compliance period, kg.
$M_{t,j}$ = total mass of thinning or cleaning material, j, used during the compliance period, kg.
$W_{t,j}$ = mass fraction of organic HAP in thinning or cleaning material, j, kg organic HAP per kg thinning or cleaning material.
n = number of different thinning and cleaning materials used during the compliance period.

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

(A) You may include in the determination only waste materials that are generated by coating/printing 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.

(B) You must determine either the amount of the waste materials sent to a TSDF during the compliance period or the amount collected and stored during the compliance period 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.

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

(D) 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 § 63.4530(g). To the extent that waste manifests include this, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.

(5) *Calculate the total mass of coating and printing solids used.* Determine the total mass of coating and printing solids used, kg, which is the combined mass of the solids contained in all the coating and printing materials used during the compliance period, using Equation 2 of this section:

$$H_t = \sum_{i=1}^{m} \left(M_{c,i}\right) \qquad \text{(Eq. 2)}$$

Where:

H_t = total mass of solids contained in coating and printing materials used during the compliance period, kg.
$M_{c,i}$ = mass of coating or printing solids in the coating or printing material, i, used during the compliance period, kg.
m = number of coating and printing materials used during the compliance period.

(6) Calculate the organic HAP emission rate for the compliance period, kg organic HAP emitted per kg solids used, using Equation 3 of this section:

$$H_{mo} = \frac{H_e}{H_t} \qquad \text{(Eq. 3)}$$

Where:

H_{mo} = organic HAP emission rate for the compliance period, kg of organic HAP emitted per kg of solids in coating and printing materials used.
H_e = total mass organic HAP emissions from all regulated materials used during the compliance period, kg, as calculated by Equation 1 of this section.
H_t = total mass of coating and printing solids in materials used during the compliance period, kg, as calculated by Equation 2 of this section.

(7) *Compliance demonstration.* The organic HAP emission rate for the initial compliance period must be less than or equal to the applicable emission limit in Table 1 to this subpart. You must keep all records as required by §§ 63.4330 and 63.4331. As part of the Notification of Compliance Status required by § 63.4310, you must identify the coating/printing operation(s) for which you used the emission rate without add-on controls option and submit a

statement that the coating/printing 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 Table 1 to this subpart, determined according to the procedures in this section.

(b) For dyeing and finishing operations, you may use the emission rate without add-on controls option for any individual dyeing/finishing operation, for any group of dyeing/finishing operations in the affected source, or for dyeing/finishing operations as a group in the affected source. You must use the compliant material option for any dyeing/finishing 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 dyeing/finishing operation or group of operations must meet the applicable emission limit in Table 1 to this subpart but is not required to meet the operating limits or work practice standards in §§ 63.4292 and 63.4293, respectively. You must meet all the requirements of this section to demonstrate initial compliance with the applicable emission limit in Table 1 to this subpart for the dyeing/finishing operation(s). When calculating the organic HAP emission rate according to this section, do not include any dyeing and finishing materials used on dyeing/finishing operations for which you use the compliant material option.

(1) *Determine the mass fraction of organic HAP for each material.* Determine the mass fraction of organic HAP for each dyeing, finishing, and cleaning material used during the compliance period according to the requirements in § 63.4341(e)(1).

(2) *Determine the mass of each material used.* Determine the mass (kg) of each dyeing, finishing, and cleaning material used during the compliance period by measurement or usage records.

(3) *Calculate the mass of organic HAP emissions.* The mass of organic HAP emissions is the combined mass of organic HAP contained in all dyeing, finishing, and cleaning materials used during the compliance period minus the organic HAP in certain waste materials. Calculate the mass of organic HAP emissions using Equation 4 of this section:

$$H_e = A - R_w \qquad \text{(Eq. 4)}$$

Where:

H_e = total mass of organic HAP emissions during the compliance period, kg.
A = total mass of organic HAP in the dyeing, finishing, and cleaning materials used during the compliance period, kg, as calculated in Equation 4B of this section.
R_w = total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the compliance period, kg, determined according to paragraph (b)(3)(ii) of this section. (You may assign a value of zero to R_w if you do not wish to use this allowance.)

(i) Calculate the kg organic HAP in the dyeing, finishing, and cleaning materials used during the compliance period using Equation 4A of this section:

$$A = \sum_{i=1}^{m} \left(M_{c,i}\right)\left(W_{c,i}\right) \qquad \text{(Eq. 4A)}$$

Where:

A = total mass of organic HAP in the dyeing, finishing, and cleaning materials used during the compliance period, kg.
$M_{c,i}$ = mass of dyeing, finishing, or cleaning material, i, used during the compliance period, kg.
$W_{c,i}$ = mass fraction of organic HAP in dyeing, finishing, or cleaning material, i, kg HAP per kg of material.

(ii) 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 4 of this section, then you must determine it according to paragraphs (b)(3)(ii)(A) through (D) of this section.

(A) You may include in the determination only waste materials that are generated by dyeing/finishing operations in the affected source for which you use Equation 4 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.

(B) You must determine either the amount of the waste materials sent to a TSDF during the compliance period or the amount collected and stored during the compliance period 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.

(C) Determine the total mass of organic HAP contained in the waste materials specified in paragraph (b)(3)(ii)(B) of this section.

(D) 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 § 63.4530(g). To the extent that waste manifests include this, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.

(4) *Calculate the total mass of dyeing, finishing, and cleaning materials used.* Determine the total mass of dyeing, finishing, and cleaning materials used, kg, which is the combined mass of all the dyeing, finishing, and cleaning materials used during the compliance period, using Equation 5 of this section:

$$M_t = \sum_{i=1}^{m} \left(M_{c,\,i}\right) \qquad \text{(Eq. 5)}$$

Where:

M_t = total mass of dyeing, finishing, and cleaning materials used during the compliance period, kg.
$M_{c,i}$ = mass of dyeing, finishing, or cleaning material, i, used during the compliance period, kg.
m = number of dyeing, finishing, and cleaning materials used during the compliance period.

(5) Calculate the organic HAP emission rate, kg organic HAP emitted per kg dyeing, finishing, and cleaning material used, using Equation 6 of this section:

$$H_{mo} = \frac{H_e}{M_t} \qquad \text{(Eq. 6)}$$

Where:

H_{mo} = the organic HAP emission rate for the compliance period, kg of organic HAP emitted per kg of dyeing, finishing, and cleaning materials.
H_e = total mass of organic HAP emissions from all materials used during the compliance period, kg, as calculated by Equation 4 of this section.
M_t = total mass of dyeing, finishing, and cleaning materials used during the compliance period, kg, as calculated by Equation 5 of this section.

(6) *Compliance demonstration.* The organic HAP emission rate for the initial compliance period must be less than or equal to the applicable emission limit in Table 1 to this subpart. You must keep all records as required by §§ 63.4330 and 63.4331. As part of the Notification

of Compliance Status required by § 63.4310, you must identify the dyeing/finishing operation(s) for which you used the emission rate without add-on controls option and submit a statement that the dyeing/finishing 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 Table 1 to this subpart, determined according to the procedures of this section.

(i) If your affected source performs only dyeing operations, paragraphs (b)(1) through (5) of this section apply to dyeing materials only, and you must demonstrate compliance with the emission limit in Table 1 to this subpart for dyeing operations.

(ii) If your affected source performs only finishing operations, paragraphs (b)(1) through (5) of this section apply to finishing materials only, and you must demonstrate compliance with the emission limit in Table 1 to this subpart for finishing operations.

(iii) If your affected source performs both dyeing and finishing operations, paragraphs (b)(1) through (5) of this section apply to dyeing and finishing materials combined, and you must demonstrate compliance with the emission limit in Table 1 to this subpart for dyeing and finishing operations.

§ 63.4352 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 § 63.4351(a) for coating/printing operations and according to § 63.4351(b) for dyeing/finishing operations, must be less than or equal to the applicable emission limit in Table 1 to this subpart. Each month following the initial compliance period described in § 63.4350 is a compliance period.

(b) If the organic HAP emission rate for any 1-month compliance period exceeded the applicable emission limit in Table 1 to this subpart, this is a deviation from the emission limitations for that compliance period and must be reported as specified in §§ 63.4310(c)(6) and 63.4320(a)(6).

(c) As part of each semiannual compliance report required by § 63.4320, you must identify any coating/printing operation or dyeing/finishing operation for which you used the emission rate without add-on controls option. If there were no deviations from the applicable emission limit in Table 1 to this subpart, you must submit a statement that, as appropriate, the coating/printing operations or the dyeing/finishing operations 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 Table 1 to this subpart.

(d) You must maintain records as specified in §§ 63.4330 and 63.4331.

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

§ 63.4360 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 § 63.4283. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4361(d)(5), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§ 63.4370, 63.4371, and 63.4372, and establish the operating limits required by § 63.4292, no later than the applicable compliance date specified in § 63.4283. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.4361(d)(5), you must initiate the first material balance no later than the applicable compliance date specified in § 63.4283.

(2) You must develop and begin implementing the work practice plan required by § 63.4293 no later than the compliance date specified in § 63.4283.

(3) You must complete the compliance demonstration for the initial compliance period according to the requirements of § 63.4361. The initial compliance period begins on the applicable compliance date specified in § 63.4283 and ends on the last day of the first full month after the compliance date, or the date you conduct the performance tests of the emission capture systems and add-on control devices, or initiate the first liquid-liquid material balance for a solvent recovery system, whichever is later. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.4370, 63.4371, and 63.4372; results of liquid-liquid material balances conducted according to § 63.4361(d)(5); calculations according to § 63.4561 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 Table 1 to this subpart; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.4374; and documentation of whether you developed and implemented the work practice plan required by § 63.4293.

(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by § 63.4292 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. This requirement does not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements of § 63.4361(d)(5).

(b) *Existing 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 § 63.4283. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4361(d)(5), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§ 63.4370, 63.4371, and 63.4372, and establish the operating limits required by § 63.4292, no later than the compliance date specified in § 63.4283. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.4361(d)(5), you must initiate the first material balance no later than the compliance date specified in § 63.4283.

(2) You must develop and begin implementing the work practice plan required by § 63.4293 no later than the compliance date specified in § 63.4283.

(3) You must complete the compliance demonstration for the initial compliance period according to the requirements of § 63.4361. The initial compliance period begins on the

applicable compliance date specified in § 63.4283 and ends on the last day of the first full month after the compliance date. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.4370, 63.4371, and 63.4372; results of liquid-liquid material balances conducted according to § 63.4361(d)(5); calculations according to § 63.4561 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 Table 1 to this subpart; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.4374; and documentation of whether you developed and implemented the work practice plan required by § 63.4293.

§ 63.4361 How do I demonstrate initial compliance?

(a) You may use the emission rate with add-on controls option for any individual coating/printing operation, for any group of coating/printing operations in the affected source, or for all of the coating/printing operations in the affected source. You may include both controlled and uncontrolled coating/printing operations in a group for which you use this option. You must use either the compliant material option, the emission rate without add-on controls option, the organic HAP overall control efficiency option, or the oxidizer outlet organic HAP concentration option for any coating/printing operation in the affected source for which you do not use the emission rate with add-on controls option. To demonstrate initial compliance, any coating/printing operation for which you use the emission rate with add-on controls option must meet the applicable emission limitations in Table 1 to this subpart, and in §§ 63.4292 and 63.4293. You must meet all the requirements of this section. When calculating the organic HAP emission rate according to this section, do not include any coating, printing, thinning, or cleaning materials used on coating/printing operations for which you use the compliant material option, the emission rate without add-on controls option, the organic HAP overall control efficiency option, or the oxidizer outlet organic HAP concentration option. You do not need to redetermine the mass of organic HAP in coating, printing, thinning, or cleaning materials that have been reclaimed onsite and reused in the coating/printing operation(s) for which you use the emission rate with add-on control option.

(b) *Compliance with operating limits.* Except as provided in § 63.4360(a)(4), and except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4361(d)(5), you must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by § 63.4292, using the procedures specified in §§ 63.4373 and 63.4374.

(c) *Compliance with work practice requirements.* You must develop, implement, and document your implementation of the work practice plan required by § 63.4293 during the initial compliance period as specified in § 63.4330.

(d) *Compliance with emission limits.* You must follow the procedures in paragraphs (d)(1) through (8) of this section to demonstrate compliance with the applicable emission limit in Table 1 to this subpart.

(1) *Determine the mass fraction of organic HAP, the mass fraction of solids, and mass of materials used.* Follow the procedures specified in § 63.4351(a)(1), (2), and (3) to determine the mass fraction of organic HAP for each coating, printing, thinning and cleaning material used during the compliance period; the mass fraction of solids for each coating and printing material used during the compliance period; and mass of each coating, printing, thinning or cleaning material used during the compliance period.

(2) *Calculate the total mass of organic HAP emissions before add-on controls.* Using Equation 1 of § 63.4351, calculate the total mass of organic HAP emissions before add-on controls from all coating, printing, thinning or cleaning materials used during the compliance period minus the organic HAP in certain waste materials in the coating/printing operation or group of coating/printing operations for which you use the emission rate with add-on controls.

(3) *Calculate the organic HAP emissions reductions for each controlled coating/printing operation.* Determine the mass of organic HAP emissions reduced for each controlled coating/printing operation during the compliance period. The emissions reductions 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 (d)(4) of this section to calculate the mass of organic HAP emissions reductions for each controlled coating/printing 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/printing operation using a solvent recovery system for which you conduct a liquid-liquid material balance, use the procedures in paragraph (d)(5) of this section to calculate the organic HAP emissions reductions.

(4) *Calculate the organic HAP emission reduction for each controlled coating/printing operation not using liquid-liquid material balance.* For each controlled coating/printing operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emissions reductions using Equation 1 of this section. The equation applies the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coating, printing, thinning, or cleaning materials that are used in the coating/printing operation served by the emission capture system and add-on control device during the compliance period. For any period of time a deviation specified in § 63.4363(c) or (d) occurs in the controlled coating/printing operation, including a deviation during startup, shutdown, or malfunction, then you must assume zero efficiency for the emission capture system and add-on control device. Equation 1 of this section treats the materials used during such a deviation as if they were used on an uncontrolled coating/printing operation for the time period of the deviation.

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

Where:

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

A_I = total mass of organic HAP in the coating and printing materials used in the controlled coating/printing operation during the compliance period, kg, as calculated in Equation 1A of this section.

B_I = total mass of organic HAP in the thinning and cleaning materials used in the controlled coating/printing operation during the compliance period, kg, as calculated in Equation 1B of this section.

H_{UNC} = total mass of organic HAP in the coating, printing, thinning, and cleaning materials used during all deviations specified in § 63.4363(c) and (d) that occurred during the compliance period in the controlled coating/printing operation, kg, as calculated in Equation 1C of this section.

CE = capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in §§ 63.4370 and 63.4371 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 §§ 63.4370 and 63.4372 to measure and record the organic HAP destruction or removal efficiency.

(i) Calculate the total mass of organic HAP in the coating and printing materials used in the controlled coating/printing operation(s) during the compliance period, kg, using Equation 1A of this section:

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

Where:

A_I = total mass of organic HAP in the coating and printing materials used in the controlled coating/printing operations(s) during the compliance period, kg.

$M_{c,i}$ = mass of coating or printing material, i, used during the compliance period, kg.

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

m = number of different coating and printing materials used during compliance period.

(ii) Calculate the total mass of organic HAP in the thinning and cleaning materials used in the controlled coating/printing operation(s) during the compliance period, kg, using Equation 1B of this section:

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

Where:

B_I = total mass of organic HAP in the thinning and cleaning materials used in the controlled coating/printing operation(s) during the compliance period, kg.

$M_{t,j}$ = total mass of thinning or cleaning material, j, used during the compliance period, kg.

$W_{t,j}$ = mass fraction of organic HAP in thinning or cleaning material, j, kg per kg.

n = number of different thinning or cleaning materials used during the compliance period.

(iii) Calculate the mass of organic HAP in the coating, printing, thinning, and cleaning materials used in the controlled coating/printing operation during deviations specified in § 63.4563(c) and (d), using Equation 1C of this section.

$$H_{UNC} = \sum_{h=1}^{q} \left(M_h\right)\left(W_h\right) \qquad \text{(Eq. 1C)}$$

Where:

H_{UNC} = total mass of organic HAP in the coating, printing, thinning, and cleaning materials used during all deviations specified in § 63.4563(c) and (d) that occurred during the month in the controlled coating/printing operation, kg.

M_h = total mass of coating, printing, thinning, or cleaning material, h, used in the controlled coating/printing operation during deviations, kg.

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

q = number of different coating, printing, thinning, and cleaning materials used.

(5) *Calculate the organic HAP emissions reductions for controlled coating/printing operation using liquid-liquid material balances.* For each controlled coating/printing operation using a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emissions reductions by applying the volatile organic matter collection and recovery efficiency to the mass of organic HAP contained in the coating, printing, thinning, and cleaning materials that are used in the coating/printing operation controlled by the solvent recovery system during the compliance period. Perform a liquid-liquid material balance for the compliance period as specified in paragraphs (d)(5)(i) through (v) of this section. Calculate the mass of organic HAP emissions reductions by the solvent recovery system as specified in paragraph (d)(5)(vi) of this section.

(i) 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 for the compliance period. The device must be initially certified by the manufacturer to be accurate to within ±2.0 percent of the mass of volatile organic matter recovered.

(ii) For each solvent recovery system, determine the mass of volatile organic matter recovered for the compliance period, kg, based on measurement with the device required in paragraph (d)(5)(i) of this section.

(iii) Determine the mass fraction of volatile organic matter for each coating and printing material used in the coating/printing operation controlled by the solvent recovery system during the compliance period, kg volatile organic matter per kg coating and printing material. 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 or printing material. In the event of any inconsistency between information provided by the manufacturer or supplier and the results of Method 24 of 40 CFR part 60, appendix A, or an approved alternative method, the test method results will govern.

(iv) Measure the mass of each coating, printing, thinning, or cleaning material used in the coating/printing operation controlled by the solvent recovery system during the compliance period, kg.

(v) For the compliance period, calculate the solvent recovery system's volatile organic matter collection and recovery efficiency using Equation 2 of this section:

$$R_V = 100 \frac{M_{VR}}{\sum_{i=1}^{m} M_i WV_{c,i} + \sum_{j=1}^{n} M_j WV_{t,j}} \qquad \text{(Eq. 2)}$$

Where:

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

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

M_i = mass of coating or printing material, i, used in the coating/printing operation controlled by the solvent recovery system during the compliance period, kg.

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

M_j = mass of thinning or cleaning material, j, used in the coating/printing operation controlled by the solvent recovery system during the compliance period, kg.

$WV_{t,j}$ = mass fraction of volatile organic matter for thinning or cleaning material, j, kg volatile organic matter per kg thinning or cleaning material.

m = number of different coating and printing materials used in the coating/printing operation controlled by the solvent recovery system during the compliance period.

n = number of different thinning and cleaning materials used in the coating/printing operation controlled by the solvent recovery system during the compliance period.

(vi) Calculate the mass of organic HAP emission reductions for the coating/printing operation controlled by the solvent recovery system during the compliance period using Equation 3 of this section and according to paragraphs (d)(5)(vi)(A) and (B) of this section:

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

Where:

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

A_{CSR} = total mass of organic HAP in the coating and printing material used in the coating/printing operation controlled by the solvent recovery system during the compliance period, kg, calculated using Equation 3A of this section.

B_{CSR} = total mass of organic HAP in the thinning and cleaning materials used in the coating/printing operation controlled by the solvent recovery system during the compliance period, kg, calculated using Equation 3B of this section.

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

(A) Calculate the total mass of organic HAP in the coating and printing materials used in the coating/printing operation(s) controlled by the solvent recovery system during the compliance period, kg, using Equation 3A of this section:

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

Where:

A_{CSR} = total mass of organic HAP in the coating and printing materials used in the coating/printing operations(s) controlled by the solvent recovery system during the compliance period, kg.

$M_{c,i}$ = mass of coating or printing material, i, used during the compliance period in the coating/printing operation(s) controlled by the solvent recovery system, kg.

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

m = number of different coating and printing materials used during compliance period.

(B) Calculate the total mass of organic HAP in the thinning and cleaning materials used in the coating/printing operation(s) controlled by the solvent recovery system during the compliance period, kg, using Equation 3B of this section:

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

Where:

B_{CSR} = total mass of organic HAP in the thinning and cleaning materials used in the coating/printing operation(s) controlled by the solvent recovery system during the compliance period, kg.

$M_{t,j}$ = total mass of thinning or cleaning material, j, used during the compliance period in the coating/printing operation(s) controlled by the solvent recovery system, kg.

$W_{t,j}$ = mass fraction of organic HAP in thinning or cleaning material, j, kg per kg.

n = number of different thinning or cleaning materials used during the compliance period.

(6) *Calculate the total mass of coating and printing solids used.* Determine the total mass of coating and printing solids used, kg, which is the combined mass of the solids contained in all the coating and printing material used during the compliance period in the coating/printing operation(s) or which you use the emission rate with add-on controls option, using Equation 2 of § 63.4351.

(7) *Calculate the organic HAP emission rate with add-on controls for the compliance period.* Determine the organic HAP emission rate with add-on controls for the compliance period, kg organic HAP emitted per kg solids used during the compliance period, using Equation 4 of this section.

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

Where:

H_{HAP} = organic HAP emission rate with add-on controls for the compliance period, kg organic HAP emitted per kg solids used.

H_e = total mass of organic HAP emissions before add-on controls from all the coating, printing, thinning, and cleaning materials used during the compliance period, kg, determined according to paragraph (d)(2) of this section.

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

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

H_t = total mass of coating and printing solids used during the compliance period, kg, from Equation 2 of § 63.4351.

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

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

(8) *Compliance demonstration.* To demonstrate initial compliance with the emission limit calculated using Equation 4 of this section, the organic emission rate with add-on controls for the compliance period must be less than or equal to the applicable emission limit in Table 1 to this subpart. You must keep all records as required by §§ 63.4330 and 63.4331. As part of the Notification of Compliance Status required by § 63.4310, you must identify the coating/printing operation(s) for which you used the emission rate with add-on controls option and submit a statement that the coating/printing 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 Table 1 to this subpart, and you achieved the operating limits required by § 63.4292 and the work practice standards required by § 63.4293.

§ 63.4362 [Reserved]

§ 63.4363 How do I demonstrate continuous compliance with the emission limitations?

(a) To demonstrate continuous compliance with the applicable emission limit in Table 1 to this subpart, the organic HAP emission rate for each compliance period, determined according to the procedures in § 63.4361, must be equal to or less than the applicable emission limit in Table 1 to this subpart. Each month following the initial compliance period described in § 63.4360 is a compliance period. You must perform the calculations in § 63.4361 on a monthly basis.

(b) If the emission rate with add-on controls for any 1-month compliance period exceeded the applicable emission limit in Table 1 to this subpart, this is a deviation from the emission limitation for that compliance period and must be reported as specified in §§ 63.4310(c)(6) and 63.4320(a)(7).

(c) You must demonstrate continuous compliance with each operating limit required by § 63.4292 that applies to you, as specified in Table 2 to this subpart.

(1) If an operating parameter is out of the allowed range specified in Table 2 to this subpart, this is a deviation from the operating limit that must be reported as specified in §§ 63.4310(c)(6) and 63.4320(a)(7).

(2) If an operating parameter deviates from the operating limit specified in Table 2 to this subpart, then you must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation. For the purposes of completing the compliance calculations specified in § 63.4361(d)(4), you must treat the materials used during a deviation on a controlled coating/printing operation as if they were used on an uncontrolled coating/printing operation for the time period of the deviation as indicated in Equation 1 of § 63.4361.

(d) You must meet the requirements for bypass lines in § 63.4374(b) for controlled coating/printing 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/printing operation is running, this is a deviation that must be reported as specified in §§ 63.4310(c)(6) and 63.4320(a)(7). For the purposes of completing the compliance calculations specified in § 63.4361(d)(4), you must treat the materials used during a deviation on a controlled coating/printing operation as if they were used on an uncontrolled coating/printing operation for the time period of the deviation, as indicated in Equation 1 of § 63.4361.

(e) You must demonstrate continuous compliance with the work practice standards in § 63.4293. 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 § 63.4330(j)(8), this is a deviation from the work practice standards that must be reported as specified in §§ 63.4310(c)(6) and 63.4320(a)(7).

(f) As part of each semiannual compliance report required in § 63.4320, you must identify the coating/printing operation(s) for which you use 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 Table 1 to this subpart, and you achieved the operating limits required by § 63.4292 and the work practice standards required by § 63.4293 during each compliance period.

(g) During periods of startup, shutdown, or malfunction of the emission capture system, add-on control device, or coating/printing operation that may affect emission capture or control device efficiency, you must operate in accordance with the startup, shutdown, and malfunction plan required by § 63.4300(c).

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

(i) [Reserved]

(j) You must maintain records as specified in §§ 63.4330 and 63.4331.

Compliance Requirements for the Organic HAP Overall Control Efficiency and Oxidizer Outlet Organic HAP Concentration Options

§ 63.4365 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 § 63.4283. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4366(d)(5), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§ 63.4370, 63.4371, and 63.4372, and establish the operating limits required by § 63.4292, no later than the applicable compliance date specified in § 63.4283. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.4366(d)(5), you must initiate the first material balance no later than the applicable compliance date specified in § 63.4283.

(2) You must develop and begin implementing the work practice plan required by § 63.4293 no later than the compliance date specified in § 63.4283.

(3) You must complete the compliance demonstration for the initial compliance period according to the requirements of § 63.4366. The initial compliance period begins on the applicable compliance date specified in § 63.4283 and ends on the last day of the first full month after the compliance date, or the date you conduct the performance tests of the emission capture systems and add-on control devices, or initiate the first liquid-liquid material balance for a solvent recovery system, whichever is later. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.4370, 63.4371, and 63.4372; results of liquid-liquid material balances conducted according to § 63.4366(d)(5); calculations according to § 63.4366 and supporting documentation showing that during the initial compliance period either the organic HAP overall control efficiency was equal to or greater than the applicable overall control efficiency limit in Table 1 to this subpart or the oxidizer outlet organic HAP concentration was no greater than 20 parts per million by weight (ppmw) on a dry basis; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.4374; and documentation of whether you developed and implemented the work practice plan required by § 63.4293.

(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by § 63.4292 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. This requirement does not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements of § 63.4366(d)(5).

(b) *Existing 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 § 63.4283. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4366(d)(5), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§ 63.4370, 63.4371, and 63.4372, and establish the operating limits required by § 63.4292, no later than the compliance date specified in § 63.4283. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.4366(d)(5), you must initiate the first material balance no later than the compliance date specified in § 63.4283.

(2) You must develop and begin implementing the work practice plan required by § 63.4293 no later than the compliance date specified in § 63.4283.

(3) You must complete the compliance demonstration for the initial compliance period according to the requirements of § 63.4366. The initial compliance period begins on the applicable compliance date specified in § 63.4283 and ends on the last day of the first full month after the compliance date. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.4370, 63.4371, and 63.4372; results of liquid-liquid material balances conducted according to § 63.4366(d)(5); calculations according to § 63.4366 and supporting documentation showing that during the initial compliance period the organic HAP overall control efficiency was equal to or greater than the applicable organic HAP overall control efficiency limit in Table 1 to this subpart or the oxidizer outlet organic HAP concentration was no greater than 20 ppmw on a dry basis and the efficiency of the capture system was 100 percent; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.4374; and documentation of whether you developed and implemented the work practice plan required by § 63.4293.

§ 63.4366 How do I demonstrate initial compliance?

(a) You may use the organic HAP overall control efficiency option or the oxidizer outlet organic HAP concentration option for any individual coating/printing operation, for any group of coating/printing operations in the affected source, or for all of the coating/printing operations in the affected source. You may include both controlled and uncontrolled coating/printing operations in a group for which you use the organic HAP overall control efficiency option. You must use either the compliant material option, the emission rate without add-on controls option, or the emission rate with add-on controls option for any coating/printing operation(s) in the affected source for which you do not use either the organic HAP overall control efficiency option or the oxidizer outlet organic HAP concentration option. To demonstrate initial compliance, any coating/printing operation for which you use the organic HAP overall control efficiency option must meet the applicable organic HAP overall control efficiency limitations in Table 1 to this subpart according to the procedures in paragraph (d) of this section. Any coating/printing operation for which you use the oxidizer outlet organic HAP concentration option must meet the 20 ppmw on a dry basis limit and achieve 100 percent capture efficiencies according to the procedures in paragraph (e) of this section. To demonstrate initial compliance with either option, you also must meet the applicable operating limits in § 63.4292 according to the procedures in paragraph (b) of this section and the work practice standards in § 63.4293 according to the procedures in paragraph (c) of this section. When calculating the organic HAP overall control efficiency according to this section, do not include any coating, printing, thinning, or cleaning materials used on coating/printing operations for which you use the compliant material option, the emission rate without add-on controls option, the emission rate with add-on controls option, or the oxidizer outlet organic HAP concentration option. You do not need to redetermine the mass of organic HAP in coating, printing, thinning, or cleaning materials that have been reclaimed onsite and reused in coating/printing operation(s) for which you use the organic HAP overall control efficiency option.

(b) *Compliance with operating limits.* Except as provided in § 63.4365(a)(4), and except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4366(d)(5), you must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by § 63.4292, using the procedures specified in §§ 63.4373 and 63.4374.

(c) *Compliance with work practice requirements.* You must develop, implement, and document your implementation of the work practice plan required by § 63.4293 during the initial compliance period as specified in § 63.4330.

(d) *Compliance with organic HAP overall control efficiency limits.* You must follow the procedures in paragraphs (d)(1) through (7) of this section to demonstrate compliance with the applicable organic HAP overall control efficiency limit in Table 1 to this subpart.

(1) *Determine the mass fraction of organic HAP and mass of coating or printing materials used.* Follow the procedures specified in § 63.4351(a)(1) and (2) to determine the mass fraction of organic HAP and mass of each coating, printing, thinning or cleaning material used during the compliance period.

(2) *Calculate the total mass of organic HAP emissions before add-on controls.* Using Equation 1 of § 63.4351, calculate the total mass of organic HAP emissions before add-on controls from all coating, printing, thinning or cleaning materials used during the compliance period minus the organic HAP in certain waste materials in the coating/printing operation or group of coating/printing operations for which you use the organic HAP overall control efficiency option.

(3) *Calculate the organic HAP emissions reductions for each controlled coating/printing operation.* Determine the mass of organic HAP emissions reduced for each controlled coating/printing operation during the compliance period. The emissions reductions 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 (d)(4) of this section to calculate the mass of organic HAP emissions reductions for each controlled coating/printing 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/printing operation using a solvent recovery system for which you conduct a liquid-liquid material balance, use the procedures in paragraph (d)(5) of this section to calculate the organic HAP emissions reductions.

(4) *Calculate the organic HAP emissions reductions for controlled coating/printing operations not using liquid-liquid material balance.* For each controlled coating/printing operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emissions reductions using Equation 1 of § 63.4361. The equation applies the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coating, printing, thinning, or cleaning materials that are used in the coating/printing operation served by the emission capture system and add-on control device during the compliance period. For any period of time a deviation specified in § 63.4363(c) or (d) occurs in the controlled coating/printing operation, including a deviation during startup, shutdown, or malfunction, then you must assume zero efficiency for the emission capture system and add-on control device. Equation 1 of § 63.4361 treats the materials used during such a deviation as if they were used on an uncontrolled coating/printing operation for the time period of the deviation.

(i) Calculate the total mass of organic HAP in the coating and printing material(s) used in the controlled coating/printing operation during the compliance period, kg, using Equation 1A of § 63.4361.

(ii) Calculate the total mass of organic HAP in the thinning and cleaning materials used in the controlled coating/printing operation(s) during the compliance period, kg, using Equation 1B of § 63.4361.

(iii) Calculate the mass of organic HAP in the coating, printing, thinning, and cleaning materials used in the controlled coating/printing operation during deviations specified in § 63.4563(c) and (d), using Equation 1C of § 63.4361.

(5) *Calculate the organic HAP emissions reductions for controlled coating/printing operations using liquid-liquid material balance.* For each controlled coating/printing operation using a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emissions reductions by applying the volatile organic matter collection and recovery efficiency to the mass of organic HAP contained in the coating, printing, thinning, or cleaning materials that are used in the coating/printing operation controlled by the solvent recovery system during the compliance period. Perform a liquid-liquid material balance for the compliance period as specified in paragraphs (d)(5)(i) through (vi) of this section.

(i) 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 for the compliance period. The device must be initially certified by the manufacturer to be accurate to within ± 2.0 percent of the mass of volatile organic matter recovered.

(ii) For each solvent recovery system, determine the mass of volatile organic matter recovered for the compliance period, kg, based on measurement with the device required in paragraph (d)(5)(i) of this section.

(iii) Determine the mass fraction of volatile organic matter for each coating and printing material used in the coating/printing operation controlled by the solvent recovery system during the compliance period, kg volatile organic matter per kg coating and printing material. 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 or printing material. In the event of any inconsistency between information provided by the manufacturer or supplier and the results of Method 24 of

40 CFR part 60, appendix A, or an approved alternative method, the test method results will govern.

(iv) Measure the mass of each coating, printing, thinning, or cleaning material used in the coating/printing operation controlled by the solvent recovery system during the compliance period, kg.

(v) For the compliance period, calculate the solvent recovery system's volatile organic matter collection and recovery efficiency using Equation 2 of § 63.4361.

(vi) Calculate the mass of organic HAP emissions reductions for the coating/printing operation controlled by the solvent recovery system during the compliance period, using Equation 4 of § 63.4361.

(6) *Calculate the organic HAP overall control efficiency.* Determine the organic HAP overall control efficiency, kg organic HAP emissions reductions per kg organic HAP emissions before add-on controls during the compliance period, using Equation 1 of this section.

$$E_{HAP} = 1 - \frac{H_e - \sum_{i=1}^{q}\left(H_{C,i}\right) - \sum_{j=1}^{r}\left(H_{CSR,j}\right)}{H_e} \times 100 \qquad \text{(Eq. 1)}$$

Where:

H_e = total mass of organic HAP emissions before add-on controls from all the coating, printing, thinning, and cleaning materials used during the compliance period, kg, determined according to paragraph (d)(2) of this section.

$H_{C,i}$ = total mass of organic HAP emissions reduction for controlled coating/printing operation, i, during the compliance period, kg, from Equation 1 of § 63.4361.

$H_{CSR,j}$ = total mass of organic HAP emissions reduction for controlled coating/printing operation, j, during the compliance period, kg, from Equation 4 of § 63.4361.

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

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

(7) *Compliance demonstration.* To demonstrate initial compliance with the organic HAP overall control efficiency in Table 1 to this subpart, organic HAP overall control efficiency calculated using Equation 1 of this section must be at least 98 percent for new or reconstructed affected sources and at least 97 percent for existing affected sources. You must keep all records as required by §§ 63.4330 and 63.4331. As part of the Notification of Compliance Status required by § 63.4310, you must identify the coating/printing operation(s) for which you used the organic HAP overall control efficiency option and submit a statement that the coating/printing operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP overall control efficiency was greater than or equal to the applicable organic HAP overall control efficiency in Table 1 to this subpart, and you achieved the operating limits required by § 63.4292 and the work practice standards required by § 63.4293.

(e) *Compliance with oxidizer outlet organic HAP concentration limit.* You must follow the procedures in paragraphs (e)(1) through (3) of this section to demonstrate compliance with the oxidizer outlet organic HAP concentration limit of no greater than 20 ppmw on a dry basis.

(1) *Install and operate a PTE.* Install and operate a PTE around each work station and associated drying or curing oven in the coating/printing operation. An enclosure that meets the requirements in § 63.4371(a) is considered a PTE. Route all organic emissions from each PTE to an oxidizer.

(2) *Determine oxidizer outlet organic HAP concentration.* Determine oxidizer outlet organic HAP concentration through performance tests using the procedures in § 63.4372(a) and (b).

(3) *Compliance demonstration.* To demonstrate initial compliance with the oxidizer outlet organic HAP concentration limit in Table 1 to this subpart, the oxidizer outlet organic HAP concentration must be no greater than 20 ppmv on a dry basis and the efficiency of the capture system must be 100 percent. You must keep all records as required by §§ 63.4330 and 63.4331. As part of the Notification of Compliance Status required by § 63.4310, you must identify the coating/printing operation(s) for which you used the oxidizer outlet organic HAP concentration option and submit a statement that the coating/printing operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the oxidizer outlet organic HAP concentration was no greater than 20 ppmv on a dry basis, the efficiency of the capture system was 100 percent, and you achieved the operating limits required by § 63.4292 and the work practice standards required by § 63.4293.

§ 63.4367 [Reserved]

§ 63.4368 How do I demonstrate continuous compliance with the emission limitations?

(a) You must meet all the requirements of this section to demonstrate continuous compliance with the organic HAP overall control efficiency. The organic HAP overall control efficiency for each compliance period, determined according to the procedures in § 63.4366(d), must be equal to or greater than the applicable organic HAP overall control efficiency limit in Table 1 to this subpart. Each month following the initial compliance period described in § 63.4365 is a compliance period. You must perform the calculations in § 63.4366(d) on a monthly basis. You must meet the applicable requirements of paragraphs (c) through (j) of this section to demonstrate continuous compliance with the oxidizer outlet organic HAP concentration limit.

(b) If the organic HAP overall control efficiency for any 1-month compliance period failed to meet the applicable organic HAP overall control efficiency in Table 1 to this subpart, this is a deviation from the emission limitation for that compliance period and must be reported as specified in §§ 63.4310(c)(6) and 63.4320(a)(7).

(c) You must demonstrate continuous compliance with each operating limit required by § 63.4292 that applies to you, as specified in Table 2 to this subpart.

(1) If an operating parameter is out of the allowed range specified in Table 2 to this subpart, this is a deviation from the operating limit that must be reported as specified in §§ 63.4310(c)(6) and 63.4320(a)(7).

(2) If an operating parameter deviates from the operating limit specified in Table 2 to this subpart, then you must assume that the emission capture system and add-on control device were achieving zero efficiency during the

time period of the deviation. For the purposes of completing the compliance calculations specified in § 63.4366(d)(4), you must treat the materials used during a deviation on a controlled coating/printing operation as if they were used on an uncontrolled coating/printing operation for the time period of the deviation as indicated in Equation 1 of § 63.4361.

(d) You must meet the requirements for bypass lines in § 63.4374(b) for controlled coating/printing 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/printing operation is running, this is a deviation that must be reported as specified in §§ 63.4310(c)(6) and 63.4320(a)(7). For the purposes of completing the compliance calculations specified in § 63.4366(d)(4), you must treat the materials used during a deviation on a controlled coating/printing operation as if they were used on an uncontrolled coating/printing operation for the time period of the deviation as indicated in Equation 1 of § 63.4361.

(e) You must demonstrate continuous compliance with the work practice standards in § 63.4293. 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 § 63.4330(j)(8), this is a deviation from the work practice standards that must be reported as specified in §§ 63.4310(c)(6) and 63.4320(a)(7).

(f) As part of each semiannual compliance report required in § 63.4320, you must identify the coating/printing operation(s) for which you use the organic HAP overall control efficiency option or the oxidizer outlet organic HAP concentration option. If there were no deviations from the organic HAP overall control efficiency limitations, submit a statement that you were in compliance with the emission limitations during the reporting period because the organic HAP overall control efficiency for each compliance period was greater than or equal to the applicable organic HAP overall control efficiency in Table 1 to this subpart, and you achieved the operating limits required by § 63.4292 and the work practice standards required by § 63.4293 during each compliance period. If there were no deviations from the oxidizer outlet organic HAP concentration limit, submit a statement that you were in compliance with the oxidizer outlet organic HAP concentration limit, the efficiency of the capture system is 100 percent, and you achieved the operating limits required by § 63.4292 and the work practice standards required by § 63.4293 during each compliance period.

(g) During periods of startup, shutdown, or malfunction of the emission capture system, add-on control device, or coating/printing operation that may affect emission capture or control device efficiency, you must operate in accordance with the startup, shutdown, and malfunction plan required by § 63.4300(c).

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

(i) [Reserved]

(j) You must maintain records as specified in §§ 63.4330 and 63.4331.

Performance Testing and Monitoring Requirements

§ 63.4370 What are the general requirements for performance tests?

(a) You must conduct each performance test required by § 63.4360 or § 63.4365 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/printing operation operating conditions.* You must conduct the performance test under representative operating conditions for the coating/printing 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 § 63.4371. You must conduct each performance test of an add-on control device according to the requirements in § 63.4372.

§ 63.4371 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 § 63.4360 or § 63.4365.

(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 coating, printing, thinning, and cleaning materials used in the coating/printing operation are applied within the capture system; coating and printing 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 the web enters the open shop environment when moving between the application station 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, up to 8 hours.

(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/printing 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/printing operation where coating, printing, thinning, and cleaning materials are applied, and all areas where emissions from these applied coating, printing, thinning, and cleaning materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating/printing 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 tenter frame, 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, printing, thinning, and cleaning material used in the coating/printing operation during each capture efficiency test run. To make the determination, substitute TVH for each occurrence of the term volatile organic compounds (VOC) in the methods.

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

$$\mathrm{TVH_{used}} = \sum_{i=1}^{n} \left(\mathrm{TVH_i}\right)\left(\mathrm{M_i}\right) \qquad \text{(Eq. 1)}$$

Where:

$\mathrm{TVH_{used}}$ = mass of liquid TVH in materials used in the coating/printing operation during the capture efficiency test run, lb.

$\mathrm{TVH_i}$ = mass fraction of TVH in coating, printing, thinning, or cleaning material, i, that is used in the coating/printing operation during the capture efficiency test run, kg TVH per kg material.

$\mathrm{M_i}$ = total mass of coating, printing, thinning, or cleaning material, i, used in the coating/printing operation during the capture efficiency test run, kg.

n = number of different coating, printing, thinning, and cleaning materials used in the coating/printing operation during the capture efficiency test run.

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

(i) Use Method 204D if the enclosure is a temporary total enclosure.

(ii) Use Method 204E if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound-emitting operations inside the building enclosure, other than the coating/printing 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:

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

Where:

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

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

$\mathrm{TVH_{uncaptured}}$ = 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/printing operation where coating, printing, thinning, and cleaning materials are applied, and all areas where emissions from these applied coating, printing, thinning, and cleaning materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating/printing operation where capture devices collect emissions generated by the coating/printing operation for routing to an add-on control device, such as the entrance and exit areas of an oven or a tenter frame, 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 if the enclosure is a temporary total enclosure.

(ii) Use Method 204E if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound-emitting operations inside the building enclosure, other than the coating/printing 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, 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.

§ 63.4372 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 §§ 63.4360 and 63.4365. You must conduct three test runs as specified in § 63.7(e)(3) and each test run must last at least 1 hour.

(a) For all types of add-on control devices, use the test methods as 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. You may also use as an alternative to Method 3B, the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas in ANSI/ASME, PTC 19.10–1981, ‘‘Flue and Exhaust Gas Analyses.’’

(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 the volatile organic matter concentration as carbon at the inlet and outlet of the add-on control device simultaneously, using Method 25 or 25A of appendix A to 40 CFR part 60. If you are demonstrating compliance with the oxidizer outlet organic HAP concentration limit, only the outlet volatile organic matter concentration must be determined. The outlet volatile organic matter concentration is determined as the average of the three test runs.

(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. Method 25A must be used to demonstrate compliance with the oxidizer outlet organic HAP concentration limit.

(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, 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 (mole/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.

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

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.

§ 63.4373 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 § 63.4360 or § 63.4365 and described in §§ 63.4370, 63.4371, and 63.4372, you must establish the operating limits required by § 63.4292 according to this section, unless you have received approval for alternative monitoring and operating limits under § 63.8(f) as specified in § 63.4292.

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

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

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

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

(1) During the performance test, you must monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every 15 minutes during each of the three test runs.

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

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

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

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

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

(iii) Annual internal and monthly external visual inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, you must take corrective action consistent with the manufacturer's recommendations and conduct a new performance test to determine destruction efficiency according to § 63.4566.

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

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

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

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

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

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

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

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

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

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

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

(f) *Emission capture system.* For each capture device that is not part of a PTE that meets the criteria of § 63.4371(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 2 to this subpart.

(1) During the capture efficiency determination required by § 63.4360 or § 63.4365 and described in §§ 63.4370 and 63.4371, 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.

§ 63.4374 What are the requirements for continuous parameter monitoring system (CPMS) installation, operation, and maintenance?

(a) *General.* You must install, operate, and maintain each CPMS specified in paragraphs (c), (e), (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/printing 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)(2)(i) through (iv) of this section.

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

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

(iii) *Valve closure continuous monitoring.* Ensure that any bypass line valve is in the closed (non-diverting) position through monitoring of valve position at least once every 15 minutes. You must inspect the monitoring system at least once every month to verify that the monitor will indicate valve position.

(iv) *Automatic shutdown system.* Use an automatic shutdown system in which the coating/printing operation is stopped when flow is diverted by the bypass line away from the add-on control device to the atmosphere when the coating/printing 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 shutdown the coating/printing operation.

(2) If any bypass line is opened, you must include a description of why the bypass line was opened and the length of time it remained open in the semiannual compliance reports required in § 63.4320.

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

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

(2) For a catalytic oxidizer, install gas temperature monitors both upstream and downstream of the catalyst bed. The temperature monitors must be in the gas stream immediately before and after the catalyst bed to measure the temperature difference across the bed.

(3) For all thermal oxidizers and catalytic oxidizers, you must meet the requirements in paragraphs (a) and (c)(3)(i) through (vii) of this section for each gas temperature monitoring device.

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

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

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

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

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

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

(vii) At least monthly, inspect components for integrity and electrical connections for continuity, oxidation, and galvanic corrosion.

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

(1) The regeneration desorbing gas mass flow monitor must be an integrating device having a measurement sensitivity of plus or minus 10 percent capable of recording the total regeneration desorbing gas mass flow for each regeneration cycle.

(2) The carbon bed temperature monitor must have a measurement sensitivity of 1 percent of the temperature recorded or 1 degree Fahrenheit, whichever is greater, and must be capable of recording the temperature within 15 minutes of completing any carbon bed cooling cycle.

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

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

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

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

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

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

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

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

(iii) Use a gauge with a minimum tolerance of 0.5 inch of water or a transducer with a minimum tolerance of 1 percent of the pressure range.

(iv) Check the pressure tap daily.

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

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

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

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

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

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

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

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

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

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

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

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

(iii) Check pressure tap pluggage daily.

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

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

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

Other Requirements and Information

§ 63.4380 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. 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 work practice standards in § 63.4293 under § 63.6(g).

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

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

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

§ 63.4381 What definitions apply to this subpart?

Terms used in this subpart are defined in the CAA, in 40 CFR 63.2, the General Provisions of this part, and in this section as follows:

Add-on control means an air pollution control device, such as a thermal oxidizer or carbon adsorber, that reduces pollution in an air stream by destruction or removal before discharge to the atmosphere.

As purchased means the condition of a coating, printing, slashing, dyeing, or finishing material as delivered to the affected source, before alteration.

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 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 or printing operation in the use of coating or printing materials, both at the point of application and at subsequent points where emissions from the coating or printing materials occur, such as flashoff, drying, or curing. As used in this subpart, multiple capture devices that collect emissions generated by a coating or printing operation are considered a single capture system.

Cleaning material means a solvent used to remove contaminants and other materials, such as dirt, grease, or oil, from a textile before or after a coating/printing operation, slashing operation, or dyeing/finishing operation or from equipment associated with the coating/printing operation, slashing operation, or dyeing/finishing operation, such as tanks, rollers, rotary screens, and knife or wiper blades. Thus, it includes any cleaning material used on substrates or equipment or both.

Coating means the application of a semi-liquid coating material to one or both sides of a textile web substrate. Once the coating material is dried (and cured, if necessary), it bonds with the textile to form a continuous solid film for decorative, protective, or functional purposes. Coating does not include finishing where the fiber is impregnated with a chemical or resin to impart certain properties, but a solid film is not formed. Coating does not include the production or printing of laminated fabric.

Coating material means an elastomer, polymer, or prepolymer material applied as a thin layer to a textile web. Such materials include, but are not limited to, coatings, sealants, inks, and adhesives. Decorative, protective, or functional materials that consist only of acids, bases, or any combination of these substances are not considered coating material for the purposes of this subpart. Thinning materials also are not included in this definition of coating materials, but are accounted for separately.

Coating operation means equipment used to apply cleaning materials to a substrate to prepare it for coating material application (surface preparation), to apply coating material to a substrate (coating application) and to dry or cure the coating material after application by exposure to heat or radiation (coating drying or curing), or to clean coating operation equipment (equipment cleaning). A single coating operation may include any combination of these types of equipment, but always includes at least the point at which a coating or cleaning material is applied and all subsequent points in the affected source where organic HAP emissions from that coating or cleaning material occur. There may be multiple coating operations in an affected source. Coating application with handheld, nonrefillable aerosol containers, touch-up markers, or marking pens is not a coating operation for the purposes of this subpart. A coating operation with coating material drying or curing at ambient conditions is not coating for the purposes of this subpart.

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

Controlled coating/printing operation means a coating/printing 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.

Dyeing means the process of applying color to the whole body of a textile substrate with either natural or synthetic dyes. Dyes are applied to yarn, fiber, cord, or fabric in aqueous solutions and dried before or after finishing, depending on the process. Continuous dyeing processes include, but are not limited to thermosol, pad/steam, pad/dry, and rope range dyeing. Batch dyeing processes include, but are not limited to, jet, beck, stock, yarn, kier, beam, pad, package and skein dyeing.

Dyeing materials means the purchased dyes and dyeing auxiliaries that are used in the dyeing process. The dyes are the substances that add color to textiles through incorporation into the fiber by chemical reaction, absorption or dispersion. Dyeing auxiliaries are various substances that can be added to the dyebath to aid dyeing. Dyeing auxiliaries may be necessary to transfer the dye from the dyebath to the fiber or they may provide improvements in the dyeing process or characteristics of the dyed fiber.

Dyeing operation means the collection of equipment used to dye a textile substrate and includes equipment used for dye application, dye fixation, textile substrate rinsing and drying, or to clean dyeing operation equipment. A single dyeing operation may include any combination of these types of equipment, but always includes at least the point at which a dyeing or cleaning material is applied and all subsequent points in the affected source where organic HAP emissions from that dyeing or cleaning material occur. There may be multiple dyeing operations in an affected source.

Emission limitation means an emission limit, operating limit, or work practice standard.

Enclosure means a structure that surrounds a source of emissions and captures and directs the emissions to an add-on control device.

Exempt compound means a specific compound that is not considered a VOC due to negligible photochemical reactivity. The exempt compounds are listed in 40 CFR 51.100(s).

Fabric means any woven, knitted, plaited, braided, felted, or non-woven material made of filaments, fibers, or yarns including thread. This term includes material made of fiberglass, natural fibers, synthetic fibers, or composite.

Finishing means the chemical treatment of a textile (e.g., with resins, softeners, stain resist or soil release agents, water repellants, flame retardants, antistatic agents, or hand builders) that improves the appearance and/or usefulness of the textile substrate.

Finishing materials means the purchased substances (including auxiliaries added to the finish to improve the finishing process or the characteristics of the finished textile) that are applied individually or as mixtures to textile substrates to impart desired properties.

Finishing operations means the collection of equipment used to finish a textile substrate including chemical finish applicator(s), flashoff area(s) and drying or curing oven(s).

Laminated fabric means fabric composed of a high-strength reinforcing base fabric between two plies of flexible thermoplastic film. Also, two or more fabrics or a fabric and a paper substrate may be bonded with an adhesive to form a laminate.

Manufacturer's formulation data means data on a material (such as a coating, printing, slashing, dyeing and finishing) 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. Manufacturer's formulation data may include, but are not limited to, information on density, organic HAP content, and coating, printing, dyeing, slashing, finishing, thinning, or cleaning material content.

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

Month means a calendar month or a pre-specified period of 28 days to 35 days to allow for flexibility in recordkeeping when data are based on a business accounting period.

Organic HAP content means the mass of organic HAP per mass of solids for a coating or printing material calculated using Equation 1 of § 63.4341. The organic HAP content is determined for the coating or printing material as purchased.

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.

Printing means the application of color and patterns to textiles, usually in the form of a paste, using a variety of techniques including, but not limited to, ink jet, roller and rotary screen printing. After application of the printing material, the textile usually is treated with steam, heat, or chemicals to fix the color.

Printing material means the purchased substances, usually including gums or thickeners, dyes and appropriate chemicals such as defoamers and resins that are mixed to produce the print pastes applied to textile substrates as patterns and colors.

Printing operation means equipment used to apply cleaning materials to a substrate to prepare it for printing material application (surface preparation), to apply printing material to a substrate (printing application) and to dry or cure the printing material after application by exposure to heat or radiation (printing material drying or curing), or to clean printing operation equipment (equipment cleaning). A single printing operation may include any combination of these types of equipment, but always includes at least the point at which a printing or cleaning material is applied and all subsequent points in the affected source where organic HAP emissions from that printing or cleaning material occur. There may be multiple printing operations in an affected source. A printing operation with printing material drying or curing at ambient conditions is not printing for the purposes of this subpart.

Regulated materials means the HAP-containing materials that are used in the three printing, coating, and dyeing subcategories defined in § 63.4281(a) and are the source of the HAP emissions limited by the requirements of this subpart. The specific regulated materials for each subcategory are defined in § 63.4282.

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.

Slashing means the application of a chemical sizing solution to warp yarns prior to weaving to protect against snagging or abrasion that could occur during weaving.

Slashing materials, also known as sizing, means the purchased compounds that are applied to warp yarns prior to weaving. Starch, gelatin, oil, wax, and manufactured polymers such as polyvinyl alcohol, polystyrene, polyacrylic acid and polyacetates are used as sizing compounds.

Slashing operation means the equipment used to mix and prepare size for application and the slasher, which is the equipment used to apply and dry size on warp yarn.

Solids means the nonvolatile portion of the coating and printing materials that makes up the dry film on a coated substrate and the pattern or color on a printed substrate.

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

Surface preparation means chemical treatment of part or all of a substrate to prepare it for coating, printing, dyeing and finishing material application.

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.

Textile means any one of the following:

(1) Staple fibers and filaments suitable for conversion to or use as yarns, or for the preparation of woven, knit, or nonwoven fabrics;

(2) Yarns made from natural or manufactured fibers;

(3) Fabrics and other manufactured products made from staple fibers and filaments and from yarn; and

(4) Garments and other articles fabricated from fibers, yarns, or fabrics.

Thinning material means an organic solvent that is added to a coating or printing material after the coating or printing material is received from the supplier.

Total volatile hydrocarbon (TVH) means the total amount of nonaqueous volatile organic material determined according to Methods 204A through 204C 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/printing operation means a coating/printing operation from which none of the organic HAP emissions are routed through an emission capture system and add-on control device.

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

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

Web means a continuous textile substrate which is flexible enough to be wound or unwound as rolls.

Tables to Subpart OOOO of Part 63

If you are required to comply with operating limits in § 63.4292, you must comply with the applicable emission limits in the following table:

TABLE 1 TO SUBPART OOOO OF PART 63.—EMISSION LIMITS FOR NEW OR RECONSTRUCTED AND EXISTING AFFECTED SOURCES IN THE PRINTING, COATING AND DYEING OF FABRICS AND OTHER TEXTILES SOURCE CATEGORY

If your affected source is a . . .	And it conducts . . .	Then this is the organic HAP emission limit for each 1-month compliance period . . .
1. New or reconstructed coating and printing affected source.	Coating operations only, or Printing operations only, or Both coating and printing operations.	You may choose any one of the following limits: Reduce organic HAP emissions to the atmosphere by achieving at least a 98 percent organic HAP overall control efficiency; Limit organic HAP emissions to the atmosphere to no more than 0.08 kg of organic HAP per kg of solids used; or If you use an oxidizer to control organic HAP emissions, operate the oxidizer such that an outlet organic HAP concentration of no greater then 20 ppmv by compound on a dry basis is achieved and the efficiency of the capture system is 100 percent.
2. Existing coating and printing affected source.	Coating operations only, or Printing operations only, or Both coating and printing operations.	You may choose any one of the following limits: Reduce organic HAP emissions to the atmosphere by achieving at least a 97 percent organic HAP overall control efficiency; Limit organic HAP emissions to the atmosphere to no more than 0.12 kg of organic HAP per kg of solids used; or If you use an oxidizer to control organic HAP emissions, operate the oxidizer such that an outlet organic HAP concentration of no greater than 20 ppmv on a dry basis is achieved and the efficiency of the capture system is 100 percent.
3. New, reconstructed or existing dyeing and finishing affected source.	a. Dyeing operations only	You must limit organic HAP emissions to the atmosphere to no more than 0.016 kg of organic HAP per kg of dyeing materials.
	b. Finishing operations only	You must limit organic HAP emissions to the atmosphere to no more than zero kg of organic HAP per kg of finishing materials as determined according to § 63.4341 of this subpart.
	c. Both dyeing and finishing operations	You must limit organic HAP emissions to the atmosphere to no more than 0.016 kg of organic HAP per kg of dyeing and finishing materials.
4. New, reconstructed or existing slashing affected source.	Slashing operations only	You must limit organic HAP emissions to the atmosphere to no more than zero kg organic HAP per kg of slashing materials as determined according to § 63.4341 of this subpart.

If you are required to comply with the operating limits by § 63.4292, you must comply with the applicable operating limits in the following table:

TABLE 2 TO SUBPART OOOO OF PART 63.—OPERATING LIMITS IF USING ADD-ON CONTROL DEVICES AND CAPTURE SYSTEM

For the following device . . .	You must meet the following operating limit . . .	And you must demonstrate continuous compliance with 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 § 63.4373(a).	i. collecting the combustion temperature data according to § 63.4374(c); ii. reducing the data to 3-hour block averages; and iii. maintaining the 3-hour average combustion at or above the temperature limit.
2. catalytic oxidizer	a. the average temperature measured just before the catalyst bed in any 3-hour period must not fall below the limit established according to § 63.4373(b); and either.	i. collecting the temperature data according to § 63.4374(c); ii. reducing the data to 3-hour block averages; and iii. maintaining the 3-hour average temperature before the catalyst bed at or above the temperature limit.
	b. 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 § 63.4373(b)(2); or.	collecting the temperature data according to § 63.4374(c), reducing the data to 3-hour block averages, and 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 § 63.4373(b)(4).	maintaining an up-to-date inspection and maintenance plan, records of annual catalyst activity checks, records of monthly inspections of the oxidizer system, and records of the catalyst bed. If a problem is discovered during a monthly or annual inspection required by § 63.4373(b)(4), you must take corrective action as soon as practicable consistent with the manufacturer's recommendations.

TABLE 2 TO SUBPART OOOO OF PART 63.—OPERATING LIMITS IF USING ADD-ON CONTROL DEVICES AND CAPTURE SYSTEM—Continued

For the following device . . .	You must meet the following operating limit . . .	And you must demonstrate continuous compliance with the operating limit by . . .
3. carbon adsorber	a. the total regeneration desorbing gas (*e.g.,* steam or nitrogen) mass flow for each carbon bed regeneration cycle must not fall below the total regeneration desorbing gas mass flow limit established according to § 63.4373(c).	i. measuring the total regeneration desorbing gas (*e.g.,* steam or nitrogen) mass flow for each regeneration cycle according to § 63.4374(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 § 63.4373(c).	i. measuring the temperature of the carbon bed after completing each regeneration and any cooling cycle according to § 63.4374(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 § 63.4373(d).	i. collecting the condenser outlet (product side) gas temperature according to § 63.4374(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 § 63.4373(e).	i. collecting the temperature data according to 63.4374(f); ii. reducing the data to 3-hour block averages; and iii. maintaining the 3-hour average temperature at or above the temperature limit.
	b. the average pressure drop of the dilute stream across the concentrator in any 3-hour period must not fall below the limit established according to § 63.4373(e).	i. collecting the pressure drop data according to 63.4374(f); and ii. reducing the pressure drop data to 3-hour block averages; and iii. maintaining the 3-hour average pressure drop at or above the pressure drop limit.
6. emission capture system that is a PTE according to § 63.44371(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 § 63.4374(g)(1) or the pressure drop across the enclosure according to § 63.4374(g)(2); and ii. reducing the data for facial velocity or pressure drop to 3-hour block averages; and iii. maintaining the 3-hour average 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 minute; or.	See item 6a of this table.
	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.	See item 6a of this table.
7. emission capture system that is not a PTE according to § 63.4371(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 § 63.4373(f).	i. collecting the gas volumetric flow rate or duct static pressure for each capture device according to § 63.4374(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 limit.

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

TABLE 3 TO SUBPART OOOO OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART OOOO

Citation	Subject	Applicable to subpart OOOO	Explanation
§ 63.1(a)(1)–(14)	General Applicability	Yes.	

TABLE 3 TO SUBPART OOOO OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART OOOO—Continued

Citation	Subject	Applicable to subpart OOOO	Explanation
§ 63.1(b)(1)–(3)	Initial Applicability Determination	Yes	Applicability to subpart 0000 is also specified in § 63.4281.
§ 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 0000.
§ 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 § 63.4381.
§ 63.3(a)–(c)	Units and Abbreviations	Yes.	
§ 63.4(a)(1)–(5)	Prohibited Activities	Yes.	
§ 63.4(b)–(c)	Circumvention/Severability	Yes.	
§ 63.5(a)	Construction/Reconstruction	Yes.	
§ 63.5(b)(1)–(6)	Requirements for Existing, Newly Constructed, and Reconstructed Sources.	Yes.	
§ 63.5(d)	Application for Approval of Construction/Reconstruction.	Yes.	
§ 63.5(e)	Approval of Construction/Reconstruction.	Yes.	
§ 63.5(f)	Approval of Construction/Reconstruction Based on Prior State Review.	Yes.	
§ 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 63.4283 specifies the compliance dates.
§ 63.6(c)(1)–(5)	Compliance Dates for Existing Sources	Yes	Section 63.4283 specifies the compliance dates.
§ 63.6(e)(1)–(2)	Operation and Maintenance	Yes.	
§ 63.6(e)(3)	Startup, Shutdown, and Malfunction Plan.	Yes	Only sources using an add-on control device to comply with the standards 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 standards.
§ 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.	Yes	Subpart 0000 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 §§ 63.4364, 63.4365, and 63.4366.
§ 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 63.4360 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 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 standards.

TABLE 3 TO SUBPART OOOO OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART OOOO—Continued

Citation	Subject	Applicable to subpart OOOO	Explanation
§ 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 standards. Additional requirements for monitoring are specified in § 63.4368.
§ 63.8(a)(4)	Additional Monitoring Requirements	No	Subpart OOOO 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 standards. Additional requirements for CMS operations and maintenance are specified in § 63.4368.
§ 63.8(c)(4)	CMS	No	Section 63.4368 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 OOOO does not have opacity or visible emission standards.
§ 63.8(c)(6)	CMS Requirements	No	Section 63.4368 specifies the requirements for monitoring systems for capture systems and add-on control devices at sources using these to comply.
§ 63.8(c)(7)–(8)	CMS Out of Control Periods and Reporting.	Yes.	
§ 63.8(d)–(e)	Quality Control Program and CMS Performance Evaluation.	No	Subpart OOOO 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 OOOO does not require the use of continuous emissions monitoring systems.
§ 63.8(g)(1)–(5)	Data Reduction	No	Sections 63.4363 and 63.4368 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 standards.
§ 63.9(f)	Notification of Visible Emissions/Opacity Test.	No	Subpart OOOO does not have opacity or visible emission standards.
§ 63.9(g)(1)–(3)	Additional Notifications When Using CMS.	No	Subpart OOOO does not require the use of continuous emissions monitoring systems.
§ 63.9(h)	Notification of Compliance Status	Yes	Section 63.4310 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 §§ 63.4330 and 63.4331.
§ 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 standards.
§ 63.10(b)(2)(vi)–(xi)		Yes.	
§ 63.10(b)(2)(xii)	Records	Yes.	
§ 63.10(b)(2)(xiii)		No	Subpart 0000 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.	

TABLE 3 TO SUBPART OOOO OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART OOOO—Continued

Citation	Subject	Applicable to subpart OOOO	Explanation
§ 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 § 63.4320(a)(4).
§ 63.10(c)(9)–(15)		Yes.	
§ 63.10(d)(1)	General Reporting Requirements	Yes	Additional requirements are specified in § 63.4320
§ 63.10(d)(2)	Report of Performance Test Results	Yes	Additional requirements are specified in § 63.4320(h).
§ 63.10(d)(3)	Reporting Opacity or Visible Emissions Observations.	No	Subpart 0000 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, Startup, Shutdown, and Malfunction Reports.	Yes	Applies only to add-on control devices at sources using these to comply with the standards.
§ 63.10(e)(1)–(2)	Additional CMS Reports	No	Subpart OOOO does not require the use of continuous emissions monitoring systems.
§ 63.10(e)(3)	Excess Emissions/CMS Performance Reports.	No	Section 63.4320(g) specifies the contents of periodic compliance reports.
§ 63.10(e)(4)	COMS Data Reports	No	Subpart OOOO does not specify requirements for opacity or COMS.
§ 63.10(f)	Recordkeeping/Reporting Waiver	Yes.	
§ 63.11	Control Device Requirements/Flares	No	Subpart OOOO does not specify use of flares for compliance.
§ 63.12	State Authority and Delegations	Yes.	
§ 63.13	Addresses	Yes.	
§ 63.14	Incorporation by Reference	Yes.	
§ 63.15	Availability of Information/ Confidentiality.	Yes.	

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

TABLE 4 TO SUBPART OOOO 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 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 naptha	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®	8052–49–3	0.01	0.5% xylenes, solvent 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 5 TO SUBPART OOOO 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 4 to this subpart 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.

[FR Doc. 02–16030 Filed 7–10–02; 8:45 am]

BILLING CODE 6560–50–P