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

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[OAR–2003–0002—FRL–7462–2]

RIN 2060–AH02

National Emission Standards for Hazardous Air Pollutants: Surface Coating of Wood Building Products

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates national emission standards for hazardous air pollutants (NESHAP) for wood building products surface coating operations. The final standards establish emission limitations, operating limits, and work practice requirements for all major sources that apply a surface coating to a wood building product to reduce certain organics listed as hazardous air pollutants (HAP) in section 112 of the Clean Air Act (CAA). These standards implement section 112(d) of the CAA by requiring all major sources to meet the HAP emission standards reflecting the application of the maximum achievable control technology (MACT).

Wood building products surface coating operations emit several HAP, including xylenes, toluene, ethyl benzene, ethylene glycol monobutyl ether (EGBE), other glycol ethers, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), methanol, styrene, and formaldehyde. We do not have the type of current detailed data on each of the facilities covered by the final rule and the people living around the facilities that would be necessary to conduct an analysis to determine the actual population exposures to the HAP emitted from these facilities and potential for resultant health effects. Therefore, we do not know the extent to which the adverse health effects described above occur in the populations surrounding these facilities. However, to the extent the adverse effects do occur, the final rule will reduce emissions and subsequent exposures. The final rule will reduce HAP emissions by approximately 4,400 megagrams per year (Mg/yr) (4,900 tons per year (tpy)) or by 63 percent from baseline.

EFFECTIVE DATE: May 28, 2003. The incorporation by reference of certain publications listed in the final rule is approved by the Director of the Federal Register as of May 28, 2003.

ADDRESSES: *Docket.* Docket ID No. OAR–2003–0002 (formerly Docket No. A–97–52) is located at the EPA Docket Center, EPA West, U.S. EPA (6102T), 1301 Constitution Avenue, NW., Room B–102, Washington, DC 20460.

Background Information Document. A background information document (BID) for the promulgated NESHAP may be obtained from the docket; the U.S. EPA Library (C267–01), Research Triangle Park, NC 27711, telephone (919) 541–2777; or from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161, telephone (703) 487–4650. Refer to ''National Emission Standards for Hazardous Air Pollutants (NESHAP) for Wood Building Products (Surface Coating) Background Information for Final Standards' (EPA–453/R–03–003). The promulgation BID contains a summary of changes made to the standards since proposal, public comments made on the proposed standards, and EPA responses to the comments.

FOR FURTHER INFORMATION CONTACT: Mr. Lynn Dail, Coatings and Consumer Products Group, Emission Standards Division (C539–03), U.S. EPA, Research Triangle Park, NC 27711; telephone number (919) 541–2363; facsimile number (919) 541–5689; electronic mail (e-mail) address *dail.lynn@epa.gov.*

SUPPLEMENTARY INFORMATION: *Regulated Entities.* The source category, which is divided into the five subcategories listed in Table 1 of this preamble, includes sources that apply coatings to wood building products. In general, these sources are covered under the North American Industrial Classification System (NAICS) codes listed in Table 1. However, sources classified under other NAICS codes may be subject to the final rule. Not all sources classified under the NAICS codes in Table 1 will be subject to the final rule because some of the classifications cover products outside the scope of the NESHAP for wood building products.

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

Subcategory	NAICS	Examples of regulated entities include those sources that apply a surface coating to . . .
Exterior Siding and Primed Doorskins	321211, 321219, 321999[a]	Panel siding, trimboard, lap siding, trim associated with siding, and primed doorskins.
Flooring	321918, 321999[a]	Solid wood flooring, engineered wood flooring, and laminated flooring.
Interior Wall Paneling and Tileboard	321211, 321999[a]	Interior wall paneling or tileboard.
Other Interior Panels	321211, 321212, 321219, 321999[a]	Panels used for purposes other than interior wall paneling, such as perforated panels.
Doors, Windows, and Miscellaneous	321911, 321918, 321999[a]	Doors, finished doorskins, finished exterior siding, windows, and other miscellaneous wood products (including moulding and millwork).

[a] The subcategory of the NAICS code depends on the final end use of the product.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding subcategories and entities likely to be regulated by this action. To determine whether your coating operation is regulated by this action, you should examine the applicability criteria in § 63.4681 of the final rule.

Docket. The EPA has established an official public docket for this action under Docket ID No. OAR–2003–0002 (formerly Docket No. A–97–52). The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. Although a part of the official docket, the public docket does not include Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. The official public docket is the collection of materials that is available for public viewing at the EPA Docket Center, EPA West, Room B–102, 1301 Constitution Avenue, NW., Washington, DC 20460. The Docket Center is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566–1744, and the telephone number for the Docket is (202) 566–1742. A reasonable fee may be charged for copying docket materials.

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

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

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

Judicial Review. Under section 307(b)(1) of the CAA, judicial review of the final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by July 28, 2003. Under section 307(b)(2) of the CAA, the requirements established by the final rule may not be challenged separately in any civil or criminal proceedings brought by EPA to enforce these requirements.

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

I. Background

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

Section 112 of the CAA requires us to list categories and subcategories of major sources and area sources of HAP and to establish NESHAP for the listed source categories and subcategories. The Flatwood Paneling (Surface Coating) category of major sources was listed on July, 16, 1992 (57 FR 31576) under the Surface Coating Processes industry group. The name of the source category was subsequently changed to Wood Building Products (Surface Coating) on November 18, 1999 (64 FR 63025) to reflect more accurately the types of surface coating operations currently used in the industry. Major sources of HAP are those that emit or have the potential to emit equal to or greater than 9.1 Mg/yr (10 tpy) of any one HAP or 22.7 Mg/yr (25 tpy) of any combination of HAP.

B. What Criteria Did We Use in the Development of NESHAP?

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

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

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

II. What Changes and Clarifications Have We Made for the Final Standards?

In response to the public comments received on the proposed standards, we made several changes for the final rule. The substantive comments, our responses, and associated rule edits are summarized in the following sections. A more detailed summary can be found in the Summary of Public Comments and Responses document, which is available from several sources (see **ADDRESSES** section).

A. Applicability

Several commenters requested a clarification of zero-HAP coatings, thinners, and cleaning solvents. They cited the Occupational Safety and Health Administration (OSHA) *de minimis* level for reporting HAP-containing materials as greater than 1 percent for noncarcinogens or greater than 0.1 percent for carcinogens. The use of this *de minimis* level for HAP reporting was implied because the data used to set the MACT floor was submitted under the same guidelines. Accordingly, language has been included in the final preamble and rule to clarify that coatings with HAP contents below 1 percent for noncarcinogens and 0.1 percent for carcinogens are considered to be zero-HAP materials.

Although affected sources are not required to report detailed HAP content information on these zero-HAP materials, inclusion of these materials could be beneficial to meeting the applicable rolling 12-month emission limit(s). Coatings that contain no HAP usually contain some amount of solid material that will help to lower the organic HAP emission rate for the 12-month compliance period.

Several commenters requested specific exclusions for products or coatings that may have been included in the MACT floor determination but do not fit into the wood building products surface coating source category. Specifically, commenters cited coatings called tempering oils (such as linseed, tall, tung, soy, otaseka, and other drying oils or mixtures of such oils) which would be regulated as part of the proposed plywood and composite wood products NESHAP (68 FR 1275, January 9, 2003). In response to these comments, we excluded drying or tempering oils from the final rule. Please refer to § 68.4681(c)(1) of the final rule which lists processes that will most likely be covered by the proposed plywood and composite wood products NESHAP.

Some commenters referred to specific products that they believed should not be subject to the requirements of the wood building products surface coating source category. These included asphalt-coated fiberboard and cellulosic ceiling tiles. Commenters asserted that neither product is coated with HAP-containing materials and that regulating such products would be burdensome for recordkeeping purposes.

We further evaluated the types of coatings and processes used to make asphalt-coated fiberboard, also called ‘‘builders board’’ or ‘‘insulation board,’’ and found that only a few facilities in the United States make these products, with varying manufacturing and coating processes. With regards to the coatings used on fiberboard products, the asphalt material can be included as part of the emulsion used in the fiberboard forming or manufacturing process, or the asphalt (mixed with mineral spirits) can be applied to the fiberboard substrate. Depending on the company and the process, the coating can be applied before the final dryer or after the final dryer with the product allowed to air dry, usually outdoors on racks.

Ceiling tiles are usually coated using slurries of titanium dioxide and various clays. Although non-HAP wetting agents or defoamers are occasionally added, there are no organic solvents used. These coatings cure by drying and not by chemical reaction and are considered durable only for dry, non-contact indoor exposure.

Because of the small number of facilities coating these products and the fact that most of the coatings associated with these types of products are applied during the substrate forming process (*e.g.*, to the wet mat being formed) or prior to the final substrate drying operation, fiberboard coating operations (including those used in the manufacture of asphalt-coated fiberboard and ceiling tiles) would be covered under the proposed plywood and composite wood products NESHAP. For this reason, these products will not be subject to the final rule for the surface coating of wood building products.

Several commenters requested more research concerning the low-coating usage cutoff, suggesting that the cutoff should be higher. The low-usage cutoff was based on the total annual coating usage of the smallest facility in the MACT floor database. All facilities in the database have annual coating usages above 4,170 liters (1,100 gallons). Available data indicate that the coating application processes and control technologies being considered are appropriate for all sources with at least this level of coatings usage. Considering that the surveyed sources in the database included a cross section of various companies, products, and locations, we do not believe that collecting additional data would raise this cutoff. Therefore, no changes have been made to the low-coating usage cutoff.

While we cannot justify raising the low usage amount or establishing low usage cutoffs for individual subcategories, additional language has been included in the final rule to exempt sources that are not commercial manufacturers of wood building products. The final rule is intended to apply only to commercial manufacturers, which are the types of facilities represented in our database.

Several commenters requested exemptions for sources that laminate paper or vinyl to composite wood products. Although we agree with the commenters that HAP emissions from wood laminating processes are typically low at the present time, an exclusion is not justified because future coating technologies could increase HAP emissions. To further clarify applicability, laminates applied prior to pressing of the substrate would be covered by the proposed plywood and composite wood products NESHAP, and the laminates applied after pressing of the substrate are covered by the wood building products (surface coating) NESHAP.

Commenters stated that the proposed definition of ‘‘wood building product’’ excludes the majority of the wooden windows and doors manufactured due to the weight characteristic. In response, we have written the definition of ‘‘wood building product’’ to exclude the weight of glass components. A wood building product is now defined as any product that contains more than 50 percent by weight wood or wood fiber, excluding the weight of glass components, and is used in the construction, either interior or exterior, of a residential, commercial, or institutional building.

As a result of comments received, the application of the rule to antifungal coatings was evaluated. Because these coatings can be applied during many different stages of production, we have clarified the applicability of the final rule to these coatings. Antifungal coatings will be covered by the wood building products surface coating NESHAP if they are applied after the substrate manufacturing process.

Several commenters requested that the final rule be written such that the HAP limits apply only to HAP that are released to the atmosphere, recognizing that some HAP in the coatings are not emitted (*i.e.*, styrene, dibutylphthalate, ethyleneimines (aziridines), and Bis 2-ethylhexyl phthalate (DEHP)). The data collection activities and subsequent MACT floor determinations were made using the assumption that all volatile organic HAP are emitted, *i.e.*, organic HAP content of the coatings is equivalent to HAP emitted.

We realize that in a few cases, such as the four compounds identified by the commenters, our assumption is not totally accurate because a small fraction of the total HAP may be tied up in the coating. However, we believe that the 12-month rolling average emission limits provide an adequate time frame for such special coatings to be used and averaged in with the other coatings and still meet the emission limits.

Due to these reasons, we do not believe special compliance alternatives are warranted for a few compounds used in some coatings. Affected sources can use alternative test procedures to demonstrate a lower HAP emissions value for a particular coating.

B. Overlap With Other NESHAP

Many commenters were concerned about the large potential for the wood building products surface coating source category to overlap with other NESHAP, specifically the promulgated wood furniture manufacturing NESHAP (60 FR 62930, December 7, 1995) and the proposed miscellaneous metal parts and products coating NESHAP (67 FR 52780, August 13, 2002). Two commenters wanted some way to consolidate all coating operations in order to be subject to only one NESHAP. One of these two commenters stated that 97 percent of the coatings used by his company, a window manufacturing facility, are applied to metal (aluminum) windows, and the remaining 3 percent of the coatings are applied to wood components of the windows. The second commenter said that 95 percent of the coatings used by his facility are applied to wood furniture components, and the remaining 5 percent of the coatings are applied to interior panels.

In response to these comments, we have included a provision to the applicability section of the final rule. This new language states that an affected source that could be subject to more than one coating NESHAP, and that has one type of surface coating operation that accounts for at least 95 percent of the total (annual) coating usage at the source, has the option of complying with the requirements of the predominant coating rule (including all applicable emissions limitations, operating limits, and work practice requirements) for all coating operations that would be subject to a NESHAP.

We are allowing the small amount of coating (less than 5 percent of the total usage) to be regulated at the same level(s) as the majority (at least 95 percent) of coating usage to simplify applicability determinations and recordkeeping and reporting for those sources. With this applicability provision, the two sources described above would be allowed to comply with the emission limits for the proposed miscellaneous metal parts NESHAP and the promulgated wood furniture manufacturing NESHAP, respectively, for all of their coating operations.

According to our data, very few sources will be able to take advantage of this predominant activity option. For this reason, we expect any emissions increase that could occur (where the emission limits in the predominant NESHAP are less stringent than the limits in the other applicable NESHAP) to be very small.

C. Subcategories

Several commenters requested additional guidance on the correct classification of moulding and trim. Originally, mouldings were classified according to the final use of the moulding. Commenters stated that the same moulding or trim could go around windows and doors, be used as baseboards, as trim between ceilings and walls, or as chair railing. To eliminate the classification of different types of moulding and trim into different subcategories, we have included all moulding and trim in one subcategory. However, this classification still excludes moulding and trim associated with wood cabinets and other types of wood furniture (which are subject to the promulgated wood furniture manufacturing NESHAP, subpart JJ). This change also involved the renaming of two subcategories. The proposed ‘‘windows and doors’’ subcategory has become the ‘‘doors, windows, and miscellaneous’’ subcategory and will include all moulding, trim, millwork, and miscellaneous products that do not fit in the other subcategories. The proposed ‘‘exterior siding, doorskins, and miscellaneous’’ subcategory has become the ‘‘exterior siding and primed doorskins’’ subcategory. As a result, the MACT floor emission limits were recalculated and are included in the final rule.

Several commenters were concerned with overlap among subcategories. The commenters described scenarios where facilities are coating multiple products, but did not provide data or specifics on any known facilities. Issues related to coating requirements for various products were considered when we developed the five subcategories and served as the basis for many of those decisions. According to our database, there are no facilities that are potentially subject to more than one subcategory emission limit. Because subcategories were created to accommodate unique differences in performance criteria that indicated a need for different HAP contents (based on the information provided by the various industry segments in the database), we believe it is not appropriate to combine operations under separate subcategories. Therefore, we are not allowing a source to choose one emission limit based on the amount of coating used in a predominant subcategory and apply that same limit to another subcategory.

Several commenters requested additional or reorganized subcategories to simplify enforcement. We do not agree with the commenters and believe the subcategorization scheme adopted for this source category is appropriate and complete. All subcategories were evaluated with respect to product performance requirements, associated coating usage, organic HAP emissions, coating application equipment, and control device applicability. Each subcategory showed technical differences within one or more of these criteria. For additional information, see Docket A–97–52.

Several commenters requested reevaluation of the MACT floors due to the addition of new products such as topcoated doorskins. These products require coatings with a higher level of HAP content or more layers of coatings than products used in the MACT analysis. Although separating these types of topcoated or finished doorskins from the ‘‘exterior siding and primed doorskins’’ subcategory could cause sources that coat doorskins to comply with two separate emission limits, we agree that the additional layers of coatings required for finished doorskins are likely to have higher HAP emissions than primed doorskins. We also agree that finished doorskins have more demanding and stringent performance requirements than primed-only doorskins. In response, we have included finished doorskins in the ‘‘doors, windows, and miscellaneous’’ subcategory where the exterior climate performance requirements associated with all doors and windows have been accounted for with the higher emission limits.

Several commenters also requested subcategories related to color coatings due to the increased use of these coatings since the MACT analysis was begun. Because the commenters offered no explanation for the differences between color and clear coatings, we can only consider the fact that business decisions were made to add color coatings. This alone is not a compelling technical reason to subcategorize differently or to change the MACT floors. The data used to determine subcategories and the applicable MACT floor level of control were the best information available to EPA at the time. Production is updated continuously for various reasons, and changing the MACT floor determination based on constantly changing conditions would not be appropriate.

D. MACT Limits

Several commenters disagreed with the zero HAP emission limits that were established for the NESHAP. Specifically, the commenters felt that the MACT limits should contain at least two significant figures to account for the presence of a small amount of HAP in what we have described as non-HAP coatings. To address these concerns and to clarify that the MACT limits are not absolute zero for some new sources, the final rule includes a change in the metric units from kilogram HAP/liter solids to grams HAP/liter solids where the value is rounded to the nearest integer.

Several commenters argued that metric units should not be used to demonstrate compliance. The use of metric units instead of English units is based on Federal government policy (the Metric Conversion Act of 1975 as amended by the Omnibus Trade and Competitiveness Act of 1988). While metric units are included, compliance is not required through metric units because the MACT floor determination used English units. Accordingly, we have included language stating that compliance can be demonstrated using either English or metric units.

E. Test Methods

One commenter noticed that some ASTM test methods have been updated. The listed test methods have been updated and incorporated by reference in the final rule.

Several commenters asked for clarification on using methods specified by the NESHAP for determining certain qualities of the coatings, thinners, and cleaning materials. As a result, we included provisions in the final rule that owners or operators are allowed to submit an alternative technique if the test methods specified in the final rule are insufficient to determine the specified qualities. For mass fraction of organic HAP, the final rule has been written to allow resolution of any discrepancies between the test methods for determining the mass fraction of organic HAP versus formulation data through consultation with the regulatory compliance authority.

Many commenters also expressed confusion regarding the use of Method 24 as an alternative to Method 311. According to the commenters, Method 24 requires that the water content of the coating be determined and subtracted from the total volatile content. This determination contains greater variability than the limit in the final rule for existing and new sources that fall into the ''other interior panels'' and the ''exterior siding and primed doorskins'' subcategories and new sources that fall into the ''interior panels and tileboard'' subcategory. Therefore, the final rule includes the provision that Method 24 will not be used for those coatings with a water content that would result in an effective detection limit greater than the applicable emission limit.

Two commenters disagreed with the use of a helium gas pycnometer to determine the volume fraction of coating solids (which is required by ASTM D 6093). Section 63.4741(b) of the proposal provided two options for determining the volume fraction of coating solids (nonvolatiles) for each coating: (1) Use of either of the two referenced ASTM methods (D2697–86 (Reapproved 1998) or D6093–97), or (2) use of information from the supplier or manufacturer of the material. In response to the commenters' concerns, a third option has been included in the final rule that allows the amount of coating solids to be calculated using the total volatile matter content of the coating and the average density of the volatile matter in the coating. If these values cannot be determined using one of the specified methods, the owner or operator may submit an alternative technique for determining their values for approval by the Administrator.

Several commenters asked that the final rule clearly specify whether compliance demonstration calculations are to be rounded or truncated to the number of decimal places specified in the emission limit. The commenters recommended that results be truncated to three digits after the decimal.

In response, language has been included in the final rule that specifies that compliance is demonstrated by rounding the rolling 12-month emission rate (to two decimal places for English units and the nearest integer for metric units), and not by rounding the individual numbers used to determine the rolling 12-month rolling emission rate.

F. Cost and Economic Assumptions and Impacts

Due to changes in the MACT floor emission limits for the ''other interior panels'' subcategory and changes to the number of estimated affected sources in the ''exterior siding and primed doorskins'' and ''doors, windows, and miscellaneous'' subcategories, the overall industry cost impacts have changed to $22.5 million.

G. Compliance Procedures

Several commenters noted a discrepancy between the proposed § 63.4692(b)(ii) and (iii). Section 63.4692(b)(ii) reduces the data to block averages, but § 63.4692(b)(iii) maintains the 3-hour average combustion temperature at or above the limit. We made corresponding changes to Table 3 to Subpart QQQQ to Part 63 to read, ''maintain the 3-hour block average'' wherever warranted.

Several commenters disagreed with the omission of control devices other than thermal oxidation. The commenters recommended that provisions for biofilters and other innovative technologies be added to compliance Option 3. Compliance Option 3 does not preclude the use of biofilters or other control technologies. You may submit your request for any innovative control technology to the Administrator for approval. Plans for monitoring and recordkeeping requirements should be submitted along with such proposals.

Based on the type and level of HAP emissions at most wood building product surface coating operations, we do not consider biofilters as a likely control technology to be applied to such emission sources. Therefore, specific operating limits and compliance procedures for biofilters have not been included in the final rule. However, the proposed plywood and composite wood products rule (68 FR 1275, January 9, 2003) does include specific operating limits and compliance procedures for biofilters, and these can be used as examples when submitting your request for an alternative control technology.

H. Control Device Operating Limit Requirements

Several commenters stated that the proposed rule does not specify how to account for equipment start ups, shut downs or malfunctions in the calculation of the 3-hour averages used to determine compliance with operating limits for add-on control devices. The commenters suggested that the rule specify that the operating data collected when the control device is ''not receiving emissions'' not be included in the 3-hour average calculations. We have included language in the final rule to exclude monitoring data from the 3-hour average calculation that was generated during periods when the control device was not receiving emissions.

Several commenters disagreed with the requirement for periodically adjusting the air-to-fuel ratio for catalytic oxidizers. The commenters stated that adding this requirement to the inspection and maintenance plan has no performance benefit. The purpose of the inspection and maintenance plan is to assure that the catalytic oxidizer operates at the conditions that will achieve or exceed the emission destruction efficiency for the control device demonstrated by the performance test. Based on our review, we concluded that a requirement for periodic adjustment of the air-to-fuel ratio is not needed to assure compliance of a catalytic oxidizer. We have written the final rule to exclude the requirement for periodically adjusting the air-to-fuel ratio in the inspection and maintenance plan.

Several commenters stated that the catalyst test procedures should be worked out between the facility and the catalyst test provider, not the manufacturer or supplier as specified in the inspection and maintenance plan requirements. We agree that the catalyst test providers should be consulted. The catalyst test provider will test the catalyst after the performance test to determine any catalyst degradation that may have occurred in the period after the performance testing. Although this is not required for compliance, it may be beneficial to test the catalyst at the time of the performance test to determine a baseline for future catalyst testing.

I. Startup, Shutdown, and Malfunction (SSM)

One commenter stated that bypass lines are often used in situations that are not considered malfunctions. In certain situations, operation of the control device is not always necessary to meet the emission limit. This situation can occur on a coating line that is used for coating operations covered by different compliance options conducted at different times. If the coatings used on one product comply with the applicable emission limit (*e.g.* compliant coatings option), the source may prefer to bypass the control device to lower annual expenses associated with operating the air pollution control system. This situation is not a malfunction and would not be addressed in the source's SSM plan.

The final rule explicitly states that requirements for the use of bypass lines apply during periods that ''controlled'' coating operations are being conducted. The language assures continuous compliance with the applicable emission limit at those sources electing to use Option 3 to comply with the emission limit using a capture and control device system that is equipped with a bypass line.

J. Recordkeeping and Reporting

Several commenters requested fewer recordkeeping and calculation requirements for coatings that have no HAP content. We agree that it is not necessary from the perspective of implementing and enforcing the final rule to require an owner or operator to perform all of the compliance calculation, recordkeeping, and reporting requirements specified in the final rule where the result will always be zero organic HAP per liter or gallon of coating solids.

For such zero-HAP materials, we have included a provision in § 63.4741(a)(1)(i) and (a)(4) of the final rule specifying that if the mass fraction of organic HAP in a coating is zero, as determined according to § 63.4741(a), then the source is not required to determine the volume fraction of coating solids and density or to calculate the organic HAP content. The following notification, reporting, and recordkeeping sections of the final rule were written to fully incorporate this provision: §§ 63.4710(c)(8)(i), 63.4720(a)(5)(ii), and 63.4730(c), (c)(2), (f), and (g).

III. What Are the Final Standards?

A. What Is the Source Category?

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

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

The final NESHAP requirements do not apply to the manufacture or application of surface coatings to prefabricated/premanufactured or mobile/modular homes. You are also not subject to the final rule if your wood building products surface coating operations are located at an area source. An area source of HAP is any source that has the potential to emit HAP but is not a major source. You may establish area source status by limiting the source's potential to emit HAP through appropriate mechanisms available through the permitting authority.

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

If an affected source has surface coating operations subject to the requirements of another NESHAP that account for at least 95 percent of the total (annual) coating usage for the source, the requirements, including all applicable emission limitations, operating limits, and work practices, of the predominant NESHAP can be applied to all coating operations that are subject to a NESHAP.

B. What Is the Affected Source?

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

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

Emission Limits. The final rule limits organic HAP emissions from each new or reconstructed affected source using the emission limits in Table 2 of this preamble. The emission limits for each existing affected source are given in Table 3 of this preamble. Affected sources may comply with the emission limits using either English or metric units. These limits are based on five subcategories that group similar operations and types of coatings. The final rule allows several compliance options to achieve the emission limits. You could comply by applying materials (coatings, thinners, and cleaning materials) that meet the emission limits, either individually or collectively. You could also use a capture system and add-on control device to meet the emission limits, or you could comply by using a combination of these approaches.

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

For any affected source applying coating to . . .	The organic HAP emission limit you must meet, in grams (g) HAP/liter solids (pounds (1b) HAP/gallon solids), is:
Exterior siding and primed doorskins.	0 (0.00)
Flooring	0 (0.00)
Interior wall paneling or tileboard.	5 (0.04)
Other interior panels	0 (0.00)
Doors, windows, and miscellaneous.	57 (0.48)

TABLE 3.—EMISSION LIMITS FOR EXISTING AFFECTED SOURCES

For any affected source applying coating to . . .	The organic HAP emission limit you must meet, in g HAP/liter solids (lb HAP/gallon coating solids), is:
Exterior siding and primed doorskins.	7 (0.06)
Flooring	94 (0.78)
Interior wall paneling or tileboard	183 (1.53)
Other interior panels	20 (0.17)
Doors, windows, and miscellaneous.	231 (1.93)

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

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

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

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

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

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

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

D. What Are the Testing and Initial Compliance Requirements?

New or reconstructed affected sources must be in compliance upon initial startup of the affected source or by May 28, 2003, whichever is later. Existing affected sources must be in compliance with the final standards no later than May 29, 2006.

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

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

Emission Limits. There are several options for complying with the emission limits, and the testing and initial compliance requirements vary accordingly. You may use different compliance options for different coating operations within the affected source and also for the same coating operation at different times.

Option 1: Compliance based on compliant materials. If you demonstrate compliance based on the use of compliant materials, you must determine the mass of organic HAP in each coating, thinner, and cleaning material used and the volume fraction of coating solids in each coating used each month during the compliance period. You must demonstrate that the organic HAP content of each coating meets the applicable emission limit, and that you use no thinners or cleaning materials that contain organic HAP.

To determine the mass fraction of organic HAP in coatings, thinners, and cleaning materials and the volume fraction of coating solids, you may either rely on manufacturer's data or on test results using the test methods listed below. You may use alternative test methods provided you get EPA approval in accordance with the General Provisions in 40 CFR 63.7(f).

- For mass fraction of organic HAP, use Method 311 of 40 CFR part 63, appendix A. If there are discrepancies between the methods for determining the mass fraction of organic HAP, they must be resolved through consultation with the regulatory compliance authority.
- The promulgated rule allows you to use non-aqueous volatile matter as a surrogate for organic HAP, which includes all organic HAP plus all other organic compounds, and excluding water. If you choose this option, then you must use Method 24 of 40 CFR part 60, appendix A.
- For volume fraction of coating solids, use one of these options: (1) Use either of the two referenced ASTM methods (D2697–86, 1998, or D6093–97); or (2) calculate using the total volatile matter content of the coating and the average density of the volatile matter in the coating. If the mass fraction of organic HAP in a coating is zero, as determined through test results or manufacturer's formulation data, then the source is not required to determine the volume fraction of coating solids and density or to calculate the organic HAP content.

To demonstrate initial compliance based on the material used, you must demonstrate that the organic HAP content of each coating meets the applicable emission limit, and that you use no organic HAP thinners or cleaning materials.

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

- Determine the quantity of each coating, thinner, and cleaning material used.
- Calculate the total mass of organic HAP in all materials and total volume of coating solids used each month. You may subtract the total mass of organic HAP contained in waste materials you send to a hazardous waste treatment, storage, and disposal facility regulated under 40 CFR part 262, 264, 265, or 266.
- Calculate the total mass of organic HAP emissions and total volume of coating solids for the compliance period by adding together all the monthly values for mass of organic HAP and for volume of coating solids for the 12 months in the compliance period.
- Calculate the ratio of the total mass of organic HAP for the materials used to the total volume of coating solids used for the compliance period.
- Record the calculations and results and include them in your Notification of Compliance Status.

Option 3: Compliance based on the emission rate with add-on controls. If you use a capture system and add-on control device, other than a solvent recovery system for which you conduct a liquid-liquid material balance, you must meet the following testing and compliance requirements.

- Conduct an initial performance test to determine the capture and control efficiencies of the equipment and to establish operating limits to be achieved on a continuous basis. The performance test would have to be completed by the compliance date for existing sources and no later than 180 days after the compliance date for new or reconstructed affected sources.
- Determine the mass fraction of organic HAP in each material and the volume fraction of coating solids for each coating used each month of the compliance period.
- Calculate the total mass of organic HAP in all materials and total volume of coating solids used each month in the coating operation or group of coating operations. You may subtract from the total mass of organic HAP the amount contained in waste materials you send to a hazardous waste treatment, storage, and disposal facility regulated under 40 CFR part 262, 264, 265, or 266.
- Calculate the organic HAP emission reductions for the controlled coating operations using the capture and control efficiencies determined during the performance test and the total mass of organic HAP in materials used in controlled coating operations.
- Calculate the total mass of organic HAP emissions and total volume of coating solids for the compliance period by adding together all monthly values for mass of organic HAP and for volume of coating solids for the 12 months in the compliance period.
- Calculate the ratio of the total mass of organic HAP emissions to the total volume of coating solids used during the compliance period.
- Record the calculations and results and include them in the Notification of Compliance Status.

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

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

- Method 1 or 1A for selection of the sampling sites.
- Method 2, 2A, 2C, 2D, 2F, or 2G to determine the gas volumetric flow rate.
- Method 3, 3A, or 3B for gas analysis to determine dry molecular weight.
- Method 4 to determine stack moisture.
- Method 25 or 25A to determine organic volatile matter concentration. Alternatively, any other test method or data that have been validated according to the applicable procedures in Method 301 of 40 CFR part 63, appendix A, and approved by the Administrator, may be used.

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

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

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

If you use a thermal oxidizer, you must continuously monitor the appropriate temperature and record it at least every 15 minutes. The temperature monitor is placed in the firebox or in the duct immediately downstream of the firebox before any substantial heat exchange occurs. The operating limit would be the average temperature measured during the performance test and, for each consecutive 3-hour period, the average temperature would have to be at or above this limit.

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

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

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

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

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

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

If you use a capture system and control device for compliance, you must develop and operate according to a SSMP during periods of SSM of the capture system and control device.

E. What Are the Continuous Compliance Requirements?

Emission Limits.

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

Option 2: Compliance based on the emission rate without add-on controls. If you demonstrate compliance with this option, you must demonstrate continuous compliance if, for each 12-month compliance period, the rolling 12-month emission rate is less than or equal to the applicable emission limit. You must follow the same procedures for calculating the rolling 12-month emission rate that you used for the initial compliance period.

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

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

Operating Limits. If you use an emission capture system and control device, the final rule requires you to achieve, on a continuous basis, the operating limits you establish during the performance test. If the continuous monitoring shows that the capture system and control device are operating outside the range of values established during the performance test, you have deviated from the established operating limits.

If you operate a capture and control system that is equipped with a bypass line, you must demonstrate that organic HAP emissions collected by the capture system are being routed to the control device at all times while controlled coating operations are being conducted. This demonstration is accomplished by monitoring for potential bypass of the control device. You may choose from the following four monitoring procedures:

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

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

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

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

If you use a capture system and control device for compliance, you must operate according to your SSMP during periods of SSM of the capture system and control device.

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

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

Initial Notifications. If the final rule applies to you, you must send a notification to the EPA Regional Office in the region where your source is located, and to your State agency, within 120 days after the date of initial startup or September 25, 2003, whichever is later. The report notifies us and your State agency that you have constructed a new source, reconstructed an existing source, or you have an existing source that is subject to the final rule. Thus, it allows you and the permitting authority to plan for compliance activities. You will also need to send a notification of planned construction or reconstruction of a source that would be subject to the final rule and apply for approval to construct or reconstruct.

Notification of Performance Test. If you demonstrate compliance by using a capture system and control device for which you do not conduct a liquid-liquid material balance, you must conduct a performance test. The performance test must be no later than 180 days after initial startup or November 24, 2003, whichever is later for a new or reconstructed affected source and no later than the compliance date for an existing affected source (May 29, 2006). You must notify us (or the delegated State or local agency) at least 60 calendar days before the performance test is scheduled to begin, as indicated in the General Provisions for the NESHAP.

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

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

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

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

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

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

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

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

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

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

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

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

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

IV. What Are the Environmental, Energy, Cost, and Economic Impacts?

A. What Are the Air Impacts?

The final rule will reduce nationwide organic HAP emissions from existing major sources by approximately 4,400 Mg/yr (4,900 tpy). This represents a reduction of 63 percent from the baseline organic HAP emissions of 7,000 Mg/yr (7,800 tpy).

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

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

C. What Are the Cost and Economic Impacts?

Total annual cost of compliance for the estimated 215 existing major sources was projected to be $22.5 million. Due to consolidation throughout the industry, there is not expected to be any net growth within the wood building products surface coating industry during the next 5 years. Therefore, there are no projected impacts for new sources.

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

For affected sources, the median profit margin will remain unchanged, with small entities being slightly more affected by the final rule. The median profit margin for small entities is expected to decrease from 2.8 percent to 2.7 percent while the median profit margin for large entities is expected to decrease from 3.1 percent to 3.0 percent. Therefore, we do not expect an adverse economic impact on the industry as a whole.

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

V. Statutory and Executive Order Reviews

A. Executive Order 12866, Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), EPA must determine whether the regulatory action is ''significant'' and therefore subject to 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 standards 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 obligations of recipients thereof; or

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

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

B. Paperwork Reduction Act

The information collection requirements in the final rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501, *et seq.* An Information Collection Request (ICR) document has been prepared by EPA (ICR No. 2034.02) and a copy may be obtained from Susan Auby by mail at the Collection Strategies Division (MD–2822T), U.S. EPA, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, by e-mail at *auby.susan@epa.gov,* or by calling (202) 566–1672. A copy may also be downloaded from the internet at *http://www.epa.gov/icr.* The information requirements are not effective until OMB approves them.

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

The final rule requires record maintenance of all coatings, thinners, and cleaning materials data and calculations used to demonstrate compliance. This information includes the volume of coatings and other materials used during each compliance period, mass fraction of organic HAP, density, and, for coatings only, volume fraction of coating solids (as applicable).

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

The monitoring, recordkeeping, and reporting burden for this collection (averaged over the first 3 years after the effective date of the final rule) is estimated to be approximately 2,200 labor hours per year at a total annual cost of $128,000. For sources assumed to use existing add-on control devices, this estimate includes a one-time performance test and report (with repeat tests where needed) and a one-time submission of a SSMP with semiannual reports for any event when the procedures in the plan were not followed. For all sources, this estimate includes training, reading the regulation, 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 purpose of collecting, validating, and verifying information; processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

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

C. Regulatory Flexibility Act

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with the final rule. The EPA has also determined that the rule will not have a significant economic impact on a substantial number of small entities. For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business whose parent company has a maximum of 500 employees according to Small Business Administration (SBA) size standards; (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; or (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, EPA has concluded that this action will not have a significant impact on a substantial number of small entities. We have conducted an assessment of the standards on small businesses within the wood building products industries. Based on SBA size definitions for the affected industries (NAICS 321211—Hardwood Veneer and Plywood Manufacturing, NAICS 321212—Softwood Veneer and Plywood Manufacturing, NAICS 321219—Reconstituted Wood Product Manufacturing, NAICS 321911—Wood Window and Door Manufacturing, NAICS 321918—Other Millwork (including Flooring), NAICS 321999—All Other Miscellaneous Wood Product Manufacturing) and reported sales and employment data, EPA's survey identified four out of the 42 known facilities (four out of the 17 known companies) as being owned by small businesses that will be affected by the final rule. Small businesses own 10 percent of the facilities and 24 percent of the companies within the source category that will be affected by the final rule and are expected to incur 10 percent of the total industry compliance costs of $22.5 million. There are no small firms with compliance costs equal to or greater than 1 percent of their sales. The EPA believes the sample of firms included in this small entity analysis is representative of the small firms that may be affected by the promulgated rule.

The EPA also notes that, while economies of scale will require individual small firms to pay a somewhat higher proportion of revenues than large firms for compliance, the burden on most small firms is quite low nevertheless. The median compliance cost is well below 1 percent of sales for both small and large firms affected by the promulgated standards (0.18 percent and 0.02 percent of sales for small and large firms, respectively). For more information, please consult the report, ''Economic Impact Analysis for the

Wood Building Products NESHAP,'' (Docket ID No. OAR–2003–0002, formerly Docket No. A–97–52).

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

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

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

D. Unfunded Mandates Reform Act

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

The EPA has determined that the final rule does not contain a Federal mandate that may result in expenditures of $100 million or more to State, local, and tribal governments, in the aggregate, or the private sector in any 1 year nor does the final rule significantly or uniquely impact small governments, because it contains no requirements that apply to such governments or impose obligations upon them. Thus, today's rule is not subject to the requirements of sections 202 and 205 of the UMRA.

E. Executive Order 13132, Federalism

Executive Order 13132, 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'' are defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.''

The final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. None of the affected sources are owned or operated by State governments. Thus, the requirements of section 6 of the Executive Order do not apply to the final rule.

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

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." The final rule does not have tribal implications, as specified in Executive Order 13175, because tribal governments do not own or operate any sources subject to the amendments. Thus, Executive Order 13175 does not apply to the final rule.

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

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

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

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

The final rule is not subject to Executive Order 13211, "Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use (66 FR 28355, May 22, 2001), because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

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

This rulemaking involves technical standards. The EPA cites the following standards in this final rule: 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, 204A-F, and 311. The search and review results have been documented and are available in the docket (Docket ID No. OAR–2003–0002, formerly Docket No. A–97–52) of the final rule.

The three VCS were identified as acceptable alternatives to EPA test methods for the purposes of the rule.

The VCS ANSI/ASME PTC 19.10–1981, "Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus]," is cited in this 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, Part 10, is an acceptable alternative to Method 3B.

The two VCS, ASTM D2697–86 (Reapproved 1998), "Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings," and ASTM D6093–97, "Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer," are cited in this rule as acceptable alternatives to EPA Method 24 for measuring volume of solids in coatings. Currently, Method 24 does not have a procedure for determining the volume of solids in coatings. These standards fill a void in EPA Method 24 which directs that volume solids content be calculated from the coating manufacturer's formulation. The final rule does allow for the use of the volume solids content values calculated from the coating manufacturer's formulation; however, test results (if available) will take precedence if the test results do not agree with the calculated values.

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

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

In addition to the VCS we are using in the final rule, the search for emissions measurement procedures identified 14 other VCS. We determined that 11 of these 14 standards identified for measuring emissions of the HAP or surrogate subject to emission standards in the final rule were impractical alternatives to EPA test methods for the purposes of the final rule. Therefore, EPA does not intend to adopt these standards. (See Docket ID No. OAR–2003–0002, formerly Docket No. A–97–52, for further information on the methods.)

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

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. § 801, *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing the final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. The final rule is not a "major rule" as defined by 5 U.S.C. 804(2). The rule will be effective May 28, 2003.

List of Subjects in 40 CFR Part 63

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

Dated: February 28, 2003.

Christine Todd Whitman,

Administrator.

■ For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of

Federal Regulations is amended as follows:

PART 63—[AMENDED]

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

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

■ 2. Section 63.14 is amended by revising paragraphs (b)(24) and (25) and (i)(3) to read as follows:

§ 63.14 Incorporations by reference

* * * * *

(b) * * *

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

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

* * * * *

(i) * * *

(3) ANSI/ASME PTC 19.10–1981, ''Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus],'' IBR approved for §§ 63.865(b), 63.3360(e)(1)(iii), 63.4166(a)(3), 63.4766(a)(3), 63.4965(a)(3), 63.5160(d)(1)(iii), 63.9307(c)(2), and 63.9323(a)(3).

* * * * *

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

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

Sec.

What This Subpart Covers

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

Other Requirements and Information

Tables to Subpart QQQQ of Part 63

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

What This Subpart Covers

§ 63.4680 What is the purpose of this subpart?

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

§ 63.4681 Am I subject to this subpart?

(a) Except as provided in paragraphs (c) and (d) of this section, the source category to which this subpart applies is surface coating of wood building products, which means the application of coatings using, for example, roll coaters or curtain coaters in the finishing or laminating of any wood building product that contains more than 50 percent by weight wood or wood fiber excluding the weight of any glass components, and is used in the construction, either interior or exterior, of a residential, commercial, or institutional building. The wood building products source category includes the subcategories listed in paragraphs (a)(1) through (5) of this section.

(1) *Doors, windows, and miscellaneous.* The doors, windows, and miscellaneous subcategory includes doors, windows, finished doorskins, and door and window components such as millwork, moulding, or trim, and other miscellaneous wood building products including, but not limited to, all moulding and trim, shingles, and shutters.

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

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

(4) *Other interior panels.* The other interior panel subcategory includes panels that are sold for uses other than interior wall paneling, such as coated particleboard, hardboard, and perforated panels.

(5) *Exterior siding and primed doorskins.* The exterior siding and primed doorskins subcategory includes lap or panel siding, trimboard, and primed doorskins. Doorskins that are coated with more than primer are included in the doors, windows, and miscellaneous subcategory.

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

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

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

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

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

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

(iv) Surface coating that occurs during the manufacture of fiberboard, including application of clay slurry, titanium dioxide, or asphalt coatings to fiberboard.

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

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

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

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

(ix) Application of concrete forming and other drying or tempering oils to wood building products.

(x) Veneer composing.

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

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

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

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

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

(d) If you have an affected source with surface coating operations subject to the requirements of another subpart of this part that account for at least 95 percent of the total (annual) coating usage for the affected source, you may demonstrate compliance with the requirements, including all applicable emission limit(s), for that subpart for the entire affected source.

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

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

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

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

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

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

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

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

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

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

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

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

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

(1) If the initial startup of your new or reconstructed affected source is before May 28, 2003, the compliance date is May 28, 2003.

(2) If the initial startup of your new or reconstructed affected source occurs after May 28, 2003, 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 May 28, 2003.

(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 May 28, 2003, 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 May 28, 2003, whichever is later.

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

Emission Limitations

§ 63.4690 What emission limits must I meet?

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

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

(c) If the affected source applies coatings to products that are in different subcategories as described in § 63.4681(a), then you must demonstrate initial and continuous compliance by selecting one of the approaches described in paragraphs (c)(1) and (2) of this section.

(1) Conduct separate compliance demonstrations for each applicable subcategory emission limit and reflect these separate determinations in notifications, reports, and records required by §§ 63.4710, 63.4720, and 63.4730, respectively.

(2) Demonstrate compliance with the most stringent of the applicable subcategory emission limits.

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

You must include all coatings, thinners, and cleaning materials used in the affected source when determining whether the organic HAP emission rate is equal to or less than the applicable emission limit in § 63.4690. To make this determination, you must use at least one of the three compliance options listed in paragraphs (a) through (c) of this section. You may apply any of the compliance options to an individual coating operation or to multiple coating operations as a group or to the entire affected source. You may use different compliance options for different coating operations or at different times on the same coating operation. However, you may not use different compliance options at the same time on the same coating operation. If you switch between compliance options for any coating operation or group of coating operations, you must document this switch as required by § 63.4730(c), and you must report it in the next semiannual compliance report required in § 63.4720.

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

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

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

§ 63.4692 What operating limits must I meet?

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

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

(c) If you use an add-on control device other than those listed in Table 3 to this subpart, or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of alternative monitoring under § 63.8(f).

§ 63.4693 What work practice standards must I meet?

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

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

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

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

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

(4) Mixing vessels that contain organic-HAP coatings and other materials must be closed except when adding to, removing, or mixing the contents.

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

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

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

General Compliance Requirements

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

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

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

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

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

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

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

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

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

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

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

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

Notifications, Reports, and Records

§ 63.4710 What notifications must I submit?

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

(b) *Initial Notification.* You must submit the Initial Notification required by § 63.9(b) for a new or reconstructed affected source no later than 120 days after initial startup or 120 days after May 28, 2003, whichever is later. For an existing affected source, you must submit the Initial Notification no later than 120 days after May 28, 2003.

(c) *Notification of Compliance Status.* You must submit the Notification of Compliance Status required by § 63.9(h) no later than 30 calendar days following the end of the initial compliance period described in § 63.4740, § 63.4750, or § 63.4760 that applies to your affected source. The Notification of Compliance Status must contain the information specified in paragraphs (c)(1) through (9) of this section and in § 63.9(h).

(1) Company name and address.

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

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

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

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

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

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

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

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

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

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

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

(iv) The amount of waste materials and the mass of organic HAP contained in the waste materials for which you are claiming an allowance in Equation 1 of § 63.4751.

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

(i) For the compliant material option, provide an example calculation of the organic HAP content for one coating, using Equation 2 of § 63.4741.

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

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

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

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

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

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

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

§ 63.4720 What reports must I submit?

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

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

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

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

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

(iv) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the date specified in paragraph (a)(1)(iii) of this section.

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

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

(i) Company name and address.

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

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

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

(v) If you used the emission rate without add-on controls or the emission rate with add-on controls compliance option (§ 63.4691(b) or (c)), the calculation results for each rolling 12-month organic HAP emission rate during the 6-month reporting period.

(4) *No deviations.* If there were no deviations from the emission limitations in §§ 63.4690, 63.4692, and 63.4693 that apply to you, the semiannual compliance report must include a statement that there were no deviations from the emission limitations during the reporting period. If you used the emission rate with add-on controls option and there were no periods during which the continuous parameter monitoring systems (CPMS) were out-of-control as specified in § 63.8(c)(7), the semiannual compliance report must include a statement that there were no periods during which the CPMS were

out-of-control during the reporting period.

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

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

(ii) The calculation of the organic HAP content (using Equation 2 of § 63.4741) for each coating identified in paragraph (a)(5)(i) of this section. You do not need to submit background data supporting this calculation (*e.g.*, information provided by coating suppliers or manufacturers, or test reports).

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

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

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

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

(ii) The calculations used to determine the 12-month organic HAP emission rate for the compliance period in which the deviation occurred. You must provide the calculations for Equations 1, 1A through 1C, 2, and 3 in § 63.4751; and if applicable, the calculation used to determine mass of organic HAP in waste materials according to § 63.4751(e)(4). You do not need to submit background data supporting these calculations (*e.g.*, information provided by materials suppliers or manufacturers, or test reports).

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

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

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

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

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

(iv) A brief description of the CPMS.

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

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

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

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

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

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

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

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

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

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

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

(c) *SSM reports.* If you used the emission rate with add-on controls option and you had an SSM 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 SSMP, you must include the information specified in § 63.10(d) in the semiannual compliance report required by paragraph (a) of this section.

(2) If your actions were not consistent with your SSMP, you must submit an immediate SSM report as described in paragraphs (c)(2)(i) and (ii) of this section.

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

(ii) You must submit a letter to the Administrator within 7 working days after the end of the event, unless you have made alternative arrangements with the Administrator as specified in

§ 63.10(d)(5)(ii). The letter must contain the information specified in § 63.10(d)(5)(ii).

§ 63.4730 What records must I keep?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(i) [Reserved]

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

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

(1) For each deviation, a record of whether the deviation occurred during a period of SSM.

(2) The records in § 63.6(e)(3)(iii) through (v) related to SSM.

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

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

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

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

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

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

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

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

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

(7) Records of the data and calculations you used to establish the emission capture and add-on control device operating limits as specified in § 63.4767 and to document compliance with the operating limits as specified in Table 3 to this subpart.

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

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

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

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

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

Compliance Requirements for the Compliant Material Option

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

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

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

You may use the compliant material option for any individual coating operation, for any group of coating operations in the affected source, or for all the coating operations in the affected source. You must use either the emission rate without add-on controls option or the emission rate with add-on controls option for any coating operation in the affected source for which you do not use this option. To demonstrate initial compliance using the compliant material option, the coating operation or group of coating operations must use no coating with an organic HAP content that exceeds the applicable emission limit in § 63.4690 and must use no thinner or cleaning material that contains organic HAP as determined according to this section. Any coating operation for which you use the compliant material option is not required to meet the operating limits or work practice standards required in §§ 63.4692 and 63.4693, respectively. To demonstrate initial compliance with the emission limitations using the compliant material option, you must meet all the requirements of this section for the coating operation or group of coating operations using this option. Use the procedures in this section on each coating, thinner, and cleaning material in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration. You do not need to redetermine the mass of organic HAP in coatings, thinners, or cleaning materials that have been reclaimed onsite and reused in the coating operation(s) for which you use the compliant material option, provided these materials in their condition as received were demonstrated to comply with the compliant material option. If the mass fraction of organic HAP of a coating equals zero, determined according to paragraph (a) of this section, and you use the compliant material option, you are not required to comply with paragraphs (b) and (c) of this section for that coating.

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

(1) *Method 311 (appendix A to 40 CFR part 63).* You may use Method 311 for determining the mass fraction of organic HAP. Use the procedures specified in paragraphs (a)(1)(i) and (ii) of this section when performing a Method 311 test. If these values cannot be determined using Method 311, the owner or operator shall submit an alternative technique for determining their values for approval by the Administrator.

(i) Count each organic HAP that is measured to be present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4), and at 1.0 percent by mass or more for other organic HAP compounds. For example, if toluene (not an OSHA carcinogen) is measured to be 0.5 percent of the material by mass, you do not have to count it. Express the mass fraction of each organic HAP you count as a value truncated to four places after the decimal point (*e.g.*, 0.379178412 truncates to 0.3791).

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

(2) *Method 24 (appendix A to 40 CFR part 60).* For coatings, you may use Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP. (Note: Method 24 is not appropriate for those coatings with a water content that would result in an effective detection

limit greater than the applicable emission limit.)

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

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

(5) *Solvent blends.* Solvent blends may be listed as single components for some materials in data provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP mass fraction of the materials. When test data and manufacturer's data for solvent blends are not available, you may use the default values for the mass fraction of organic HAP in these solvent blends listed in Table 5 or Table 6 to this subpart. If you use the tables, you must use the values in Table 5 for all solvent blends that match Table 5 entries, and you may only use Table 6 if the solvent blends in the materials you use do not match any of the solvent blends in Table 5 and you only know whether the blend is aliphatic or aromatic. However, if the results of a Method 311 (40 CFR part 63, appendix A) test indicate higher values than those listed on Table 5 or Table 6 to this subpart, the Method 311 results will take precedence.

(b) *Determine the volume fraction of coating solids for each coating.* You must determine the volume fraction of coating solids (liters of coating solids per liter of coating) for each coating used during the compliance period by one of the methods specified in paragraph (b)(1), (2), or (3) of this section.

(1) *ASTM Method D2697–86 (Reapproved 1998) or D6093–97.* You may use ASTM Method D2697–86 (Reapproved 1998), ''Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings' (incorporated by reference, see § 63.14), or D6093–97, ''Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer'' (incorporated by reference, see § 63.14), to determine the volume fraction of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids. If these values cannot be determined using these methods, the owner operator may submit an alternative technique for determining their values for approval by the Administrator.

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

(3) *Calculation of volume fraction of coating solids.* If the volume fraction of coating solids cannot be determined using the options in paragraphs (b)(1) and (2) of this section, you must determine it using Equation 1 of this section:

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

Where:

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

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

D_{avg} = Average density of volatile matter in the coating, grams volatile matter per liter volatile matter, determined from test results using ASTM Method D1475–90 information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475–90 test results and other information sources, the test results will take precedence.

(c) *Determine the density of each coating.* Determine the density of each coating used during the compliance period from test results using ASTM Method D1475–90 or information from the supplier or manufacturer of the material. If there is disagreement between ASTM Method D1475–90 test results and the supplier's or manufacturer's information, the test results will take precedence.

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

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

Where:

H_c = Organic HAP content of the coating, grams organic HAP per liter coating solids.

D_c = Density of coating, grams coating per liter coating, determined according to paragraph (c) of this section.

W_c = Mass fraction of organic HAP in the coating, grams organic HAP per gram coating, determined according to paragraph (a) of this section.

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

(e) *Compliance demonstration.* The organic HAP content for each coating used during the initial compliance period, determined using Equation 2 of this section, must be less than or equal to the applicable emission limit in § 63.4690; and each thinner and cleaning material used during the initial compliance period must contain no organic HAP, determined according to paragraph (a) of this section. You must keep all records required by §§ 63.4730 and 63.4731. As part of the Notification of Compliance Status required in § 63.4710, you must identify the coating operation(s) for which you used the compliant material option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because you used no coatings for which the organic HAP content exceeded the applicable emission limit in § 63.4690, and you used no thinners or cleaning materials that contained organic HAP, determined according to paragraph (a) of this section.

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

(a) For each compliance period to demonstrate continuous compliance, you must use no coating for which the organic HAP content determined using Equation 2 of § 63.4741 exceeds the applicable emission limit in § 63.4690; and use no thinner or cleaning material that contains organic HAP, determined according to § 63.4741(a). A compliance period consists of 12 months. Each month after the end of the initial compliance period described in § 63.4740 is the end of a compliance period consisting of that month and the preceding 11 months.

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

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

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

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

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

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

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

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

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

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

(c) *Determine the density of each material.* Determine the density of each coating, thinner, and cleaning material used during each month from test results using ASTM Method D1475–90, information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475–90 test results and such other information sources, the test results will take precedence.

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

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

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

Where:

H_e = Total mass of organic HAP emissions during the month, grams.

A = Total mass of organic HAP in the coatings used during the month, grams, as calculated in Equation 1A of this section.

B = Total mass of organic HAP in the thinners used during the month, grams, as calculated in Equation 1B of this section.

C = Total mass of organic HAP in the cleaning materials used during the month, grams, as calculated in Equation 1C of this section.

R_w = Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the month, grams, determined according to paragraph (e)(4) of this section. (You may assign a value of zero to R_w if you do not wish to use this allowance.)

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

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

Where:

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

$Vol_{c,i}$ = Total volume of coating, i, used during the month, liters.

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

$W_{c,i}$ = Mass fraction of organic HAP in coating, i, grams organic HAP per gram coating.

m = Number of different coatings used during the month.

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

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

Where:

B = Total mass of organic HAP in the thinners used during the month, grams.

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

$D_{t,j}$ = Density of thinner, j, grams per liter.

$W_{t,j}$ = Mass fraction of organic HAP in thinner, j, grams organic HAP per gram thinner.

n = Number of different thinners used during the month.

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

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

Where:

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

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

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

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

p = Number of different cleaning materials used during the month.

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

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

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

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

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

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

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

Where:

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

$Vol_{c,i}$ = Total volume of coating, i, used during the month, liters.

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

m = Number of coatings used during the month.

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

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

Where:

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

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

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

y = Identifier for months.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

documentation of whether you developed and implemented the work practice plan required by § 63.4693.

§ 63.4761 How do I demonstrate initial compliance?

(a) You may use the emission rate with add-on controls option for any coating operation, for any group of coating operations in the affected source, or for all of the coating operations in the affected source. You may include both controlled and uncontrolled coating operations in a group for which you use this option. You must use either the compliant material option or the emission rate without add-on controls option for any coating operation in the affected source for which you do not use the emission rate with add-on controls option. To demonstrate initial compliance, the coating operation(s) for which you use the emission rate with add-on controls option must meet the applicable emission limitations in §§ 63.4690, 63.4692, and 63.4693. You must meet all the requirements of this section to demonstrate initial compliance with the emission limitations. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate without add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners, or cleaning materials that have been reclaimed and reused in the coating operation(s) for which you use the emission rate with add-on controls option.

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

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

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

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

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

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

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

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

Where:

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

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

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

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

H_{unc} = Total mass of organic HAP in the coatings, thinners, and cleaning materials used during all deviations specified in § 63.4763(c) and (d) that occurred during the month in the controlled coating operation, grams, as calculated in Equation 1D of this section.

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

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

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

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

Where:

A_c = Total mass of organic HAP in the coatings used in the controlled coating operation, grams.

$Vol_{c,i}$ = Total volume of coating, i, used during the month, liters.

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

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

m = Number of different coatings used.

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

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

Where:

B_c = Total mass of organic HAP in the thinners used in the controlled coating operation during the month, grams.

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

$D_{t,j}$ = Density of thinner, j, grams per liter.

$W_{t,j}$ = Mass fraction of organic HAP in thinner, j, grams per gram.

n = Number of different thinners used.

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

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

Where:

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

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

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

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

p = Number of different cleaning materials used.

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

$$H_{unc} = \sum_{h=1}^{q} \left(Vol_{h}\right)\left(D_{h}\right)\left(W_{h}\right) \qquad \text{(Eq. 1D)}$$

Where:

H_{unc} = Total mass of organic HAP in the coatings, thinners, and cleaning materials used during all deviations specified in § 63.4763(c) and (d) that occurred during the month in the controlled coating operation, grams.

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

D_h = Density of coating, thinner, or cleaning material, h, grams per liter.

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

q = Number of different coatings, thinners, or cleaning materials.

(i) [Reserved]

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

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

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

(3) Determine the mass fraction of volatile organic matter for each coating, thinner, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, grams volatile organic matter per gram coating. You may determine the volatile organic matter mass fraction using Method 24 of 40 CFR part 60, appendix A, or an EPA approved alternative method, or you may use information provided by the manufacturer or supplier of the coating. In the event of any inconsistency between information provided by the manufacturer or supplier and the results of Method 24 of 40 CFR part 60, appendix A, or an approved alternative method, the test method results will take precedence unless after consultation, a regulated source could demonstrate to the satisfaction of the enforcement agency that the formulation data were correct.

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

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

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

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

Where:

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

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

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

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

$WV_{c,i}$ = Mass fraction of volatile organic matter for coating, i, grams volatile organic matter per gram coating.

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

D_j = Density of thinner, j, grams per liter.

$WV_{t,j}$ = Mass fraction of volatile organic matter for thinner, j, grams volatile organic matter per gram thinner.

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

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

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

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

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

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

(7) Calculate the mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system during the month, using Equation 3 of this section:

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

Where:

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

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

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

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

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

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

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

Where:

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

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

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

$W_{c,i}$ = Mass fraction of organic HAP in coating, i, grams per gram.

m = Number of different coatings used.

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

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

Where:

B_{CSR} = Total mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system during the month, grams.

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

$D_{t,j}$ = Density of thinner, j, grams per liter.

$W_{t,j}$ = Mass fraction of organic HAP in thinner, j, grams per gram.

n = Number of different thinners used.

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

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

Where:

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

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

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

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

p = Number of different cleaning materials used.

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

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

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

Where:

H_{HAP} = Total mass of organic HAP emissions for the month, grams.

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

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

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

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

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

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

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

Where:

H_{annual} = Organic HAP emission rate for the 12-month compliance period, grams organic HAP per liter coating solids.

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

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

y = Identifier for months.

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

§ 63.4762 [Reserved]

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

(a) To demonstrate continuous compliance with the applicable emission limit in § 63.4690, the organic HAP emission rate for each compliance period, calculated using Equation 5 of § 63.4761, must be equal to or less than the applicable emission limit in § 63.4690. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in § 63.4760 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in § 63.4761 on a monthly basis using data from the previous 12 months of operation.

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

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

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

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

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

(e) You must demonstrate continuous compliance with the work practice standards in § 63.4693. If you did not develop a work practice plan, or you did not implement the plan, or you did not keep the records required by § 63.4730(k)(8), this is a deviation from the work practice standards that must be reported as specified in §§ 63.4710(c)(6) and 63.4720(a)(7).

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

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

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

(i) [Reserved]

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

§ 63.4764 What are the general requirements for performance tests?

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

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

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

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

§ 63.4765 How do I determine the emission capture system efficiency?

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

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

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

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

(b) *Measuring capture efficiency.* If the capture system does not meet both of the criteria in paragraphs (a)(1) and (2) of this section, then you must use one of the three protocols described in paragraphs (c), (d), and (e) of this section to measure capture efficiency. The capture efficiency measurements use TVH capture efficiency as a surrogate for organic HAP capture efficiency. For the protocols in paragraphs (c) and (d) of this section, the capture efficiency measurement must consist of three test runs. Each test run must be at least 3 hours in duration or the length of a production run, whichever is longer, up to 8 hours. For the purposes of this test, a production run means the time required for a single part to go from the beginning to the end of production, which includes surface preparation activities and drying or curing time.

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

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

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

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

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

Where:

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

$\mathrm{TVH_i}$ = Mass fraction of TVH in coating, thinner, or cleaning material, i, that is used in the coating operation during the capture efficiency test run, grams TVH per gram material.

$\mathrm{Vol_i}$ = Total volume of coating, thinner, or cleaning material, i, used in the coating operation during the capture efficiency test run, liters.

$\mathrm{D_i}$ = Density of coating, thinner, or cleaning material, i, grams material per liter material.

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

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

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

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

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

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

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 operation during the capture efficiency test run, grams.

$\mathrm{TVH_{uncaptured}}$ = 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, grams, determined according to paragraph (c)(4) of this section.

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

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

(1) Either use a building enclosure or construct an enclosure around the coating operation where coatings, thinners, and cleaning materials are applied, and all areas where emissions from these applied coatings and materials subsequently occur, such as

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

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

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

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

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

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

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

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

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

Where:

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

$TVH_{captured}$ = Total mass of TVH captured by the emission capture system as measured at the inlet to the add-on control device during the emission capture efficiency test run, grams, determined according to paragraph (d)(2) of this section.

$TVH_{uncaptured}$ = 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, grams, determined according to paragraph (d)(3) of this section.

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

(e) *Alternative capture efficiency protocol.* As an alternative to the procedures specified in paragraphs (c) and (d) of this section, you may determine capture efficiency using any other capture efficiency protocol and test methods that satisfy the criteria of either the DQO or LCL approach as described in appendix A to subpart KK of this part.

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

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

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

(1) Use Method 1 or 1A of appendix A to 40 CFR part 60, as appropriate, to select sampling sites and velocity traverse points.

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

(3) Use Method 3, 3A, or 3B of appendix A to 40 CFR part 60, as appropriate, for gas analysis to determine dry molecular weight. 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 [Part 10, Instruments and Apparatus]’’ (incorporated by reference, see § 63.14).

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

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

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

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

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

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

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

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

$$M_f = Q_{sd} C_c (12)(41.6)\left(10^{-6}\right) \qquad \text{(Eq. 1)}$$

Where:

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

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

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

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

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

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

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, grams/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, grams/h.

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

§ 63.4767 How do I establish the emission capture system and add-on control device operating limits during the performance test?

During the performance test required by § 63.4760 and described in §§ 63.4764, 63.4765, and 63.4766, you must establish the operating limits required by § 63.4692 according to this section, unless you have received approval for alternative monitoring and operating limits under § 63.8(f) as specified in § 63.4692.

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

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

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

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

(1) During the performance test, you must monitor and record the temperature 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 difference across the catalyst bed maintained during the performance test. This is the minimum operating limit 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 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 before the catalyst bed during the performance test. This is the minimum operating limit for your catalytic oxidizer. (**Note:** For regenerative catalytic oxidizers, the inlet to the catalyst is defined as the general zone between the inlets to the catalyst beds located in the multiple regeneration towers; select either a monitoring location or multiple monitoring locations. If multiple monitoring locations are selected, either establish separate operating limits for each location or calculate an average of the multiple measurements and set a single operating limit.)

(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 recommended procedures from the manufacturer, the catalyst supplier, or the catalyst test provider.

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

(iii) Annual internal and monthly external visual inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, you must take corrective action consistent with the manufacturer's recommendation and conduct a new performance test to determine destruction efficiency according to § 63.4766.

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

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

(2) The operating limits for your carbon adsorber are the minimum total desorbing gas mass flow recorded

during the regeneration cycle, and the maximum carbon bed temperature recorded after the cooling cycle.

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

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

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

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

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

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

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

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

(f) *Emission capture system.* For each capture device that is not part of a PTE that meets the criteria of § 63.4765(a), establish an operating limit for either the gas volumetric flow rate or duct static pressure, as specified in paragraphs (f)(1) and (2) of this section. The operating limit for a PTE is specified in Table 3 to this subpart.

(1) During the capture efficiency determination required by § 63.4760 and described in §§ 63.4764 and 63.4765, you must monitor and record either the gas volumetric flow rate or the duct static pressure for each separate capture device in your emission capture system at least once every 15 minutes during each of the three test runs at a point in the duct between the capture device and the add-on control device inlet.

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

§ 63.4768 What are the requirements for continuous parameter monitoring system installation, operation, and maintenance?

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

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

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

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

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

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

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

(7) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Any period for which the monitoring system is out-of-control and data are not available for required calculations is a deviation from the monitoring requirements.

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

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

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

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

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

(iv) *Automatic shutdown system.* Use an automatic shutdown system in which the coating operation is stopped when flow is diverted by the bypass line away from the add-on control device to the atmosphere when the coating operation is running. You must inspect the automatic shutdown system at least once every month to verify that it will detect diversions of flow and shut down the coating operation.

(2) If any bypass line is opened and there was a deviation from the applicable emission limitation, you must include a description of why the bypass line was opened and the length of time it remained open in the semiannual compliance reports required in § 63.4720.

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

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

(2) For a catalytic oxidizer, you must install a gas temperature monitor in the gas stream immediately before the catalyst bed, and if you established operating limits according to § 63.4767(b)(1) and (2), also install a gas temperature monitor in the gas stream immediately after the catalyst bed.

(i) If you establish operating limits according to § 63.4767(b)(1) and (2), then you must install the gas temperature monitors both upstream and downstream of the catalyst bed. The temperature monitors must be in the gas stream immediately before and after the catalyst bed to measure the temperature difference across the bed.

(ii) If you establish operating limits according to § 63.4767(b)(3) and (4), then you must install a gas temperature monitor upstream of the catalyst bed. The temperature monitor must be in the gas stream immediately before the catalyst bed to measure the temperature.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(iv) Check the pressure tap daily.

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

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

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

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

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

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

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

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

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

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

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

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

(iii) Check pressure tap pluggage daily.

(iv) Using an inclined manometer with a measurement sensitivity of

0.0002 inch water, check gauge calibration quarterly and transducer calibration monthly.

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

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

Other Requirements and Information

§ 63.4780 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the EPA, or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency, in addition to the EPA, has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are listed in paragraphs (c)(1) through (4) of this section:

(1) Approval of alternatives to the work practice standards under § 63.4693.

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

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

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

§ 63.4781 What definitions apply to this subpart?

Terms used in this subpart are defined in the CAA, in 40 CFR 63.2, and in this section as follows:

Add-on control means an air pollution control device, such as a thermal oxidizer or carbon adsorber, that reduces pollution in an air stream by destruction or removal before discharge to the atmosphere.

Adhesive means any chemical substance that is applied for the purpose of bonding two surfaces together.

Block average is an average of data points collected over any specified, continuous 180-minute block of time (*e.g.*, a 3-hour block could be noon to 3 p.m., with a subsequent total of eight 3-hour blocks within a 24-hour period).

Capture device means a hood, enclosure, room, floor sweep, or other means of containing or collecting emissions and directing those emissions into an add-on air pollution control device.

Capture efficiency or *capture system efficiency* means the portion (expressed as a percentage) of the pollutants from an emission source that is delivered to an add-on control device.

Capture system means one or more capture devices intended to collect emissions generated by a coating operation in the use of coatings or cleaning materials, both at the point of application and at subsequent points where emissions from the coatings or cleaning materials occur, such as flashoff, drying, or curing. As used in this subpart, multiple capture devices that collect emissions generated by a coating operation are considered a single capture system.

Cleaning material means a solvent used to remove contaminants and other materials, such as dirt, grease, oil, and dried or wet coating (*e.g.*, depainting), from a substrate before or after coating application or from equipment associated with a coating operation, such as spray booths, spray guns, racks, tanks, and hangers. Thus, it includes any cleaning material used on substrates or equipment or both.

Coating means a material applied to a substrate for decorative, protective, or functional purposes. Such materials include, but are not limited to, paints, sealants, caulks, inks, adhesives, and maskants. Decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances are not considered coatings for the purposes of this subpart.

Coating operation means equipment used to apply cleaning materials to a substrate to prepare it for coating application or to remove dried coating (surface preparation), to apply coating to a substrate (coating application) and to dry or cure the coating after application, or to clean coating operation equipment (equipment cleaning). A single coating operation may include any combination of these types of equipment, but always includes at least the point at which a coating or cleaning material is applied and all subsequent points in the affected source where organic HAP emissions from that coating or cleaning material occur. There may be multiple coating operations in an affected source. Coating application with hand-held nonrefillable aerosol containers, touchup markers, or marking pens is not a coating operation for the purposes of this subpart.

Coating solids means the nonvolatile portion of the coating that makes up the dry film.

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

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

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

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

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

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

Emission limitation means an emission limit, operating limit, or work practice standard.

Enclosure means a structure that surrounds a source of emissions and captures and directs the emissions to an add-on control device.

Exempt compound means a specific compound that is not considered a VOC due to negligible photochemical reactivity. The exempt compounds are listed in 40 CFR 51.100(s).

Finished wood product means any wood building product to which a protective, decorative, or functional layer has been applied. Materials used include, but are not limited to, paints, stains, sealers, topcoats, basecoats, primers, enamels, inks, and adhesives.

Laminated wood product means any wood building product to which a protective, decorative, or functional layer has been bonded with an adhesive. Products that are produced by bonding layers to the substrate as a part of the substrate manufacturing process (prior to pressing) are not considered laminated products under this subpart.

Manufacturer's formulation data means data on a material (such as a coating) that are supplied by the material manufacturer based on knowledge of the ingredients used to manufacture that material, rather than based on testing of the material with the test methods specified in § 63.4741. Manufacturer's formulation data may include, but are not limited to, information on density, organic HAP content, volatile organic matter content, and coating solids content.

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

Millwork means lumber that has been remanufactured into a wood building product or component such as door, window, and staircase part(s), or decorative trim.

Month means a calendar month or a pre-specified period of 28 days to 35 days to allow for flexibility in recordkeeping when data are based on a business accounting period.

Organic HAP content means the mass of organic HAP per volume of coating solids for a coating calculated using Equation 2 of § 63.4741. The organic HAP content is determined for the coating in the condition it is in when received from its manufacturer or supplier and does not account for any alteration after receipt.

Permanent total enclosure (PTE) means a permanently installed enclosure that meets the criteria of Method 204 of appendix M, 40 CFR part 51, for a PTE and that directs all the exhaust gases from the enclosure to an add-on control device.

Protective oil means an organic material that is applied to metal for the purpose of providing lubrication or protection from corrosion without forming a solid film. This definition of protective oil includes, but is not limited to, lubricating oils, evaporative oils (including those that evaporate completely), and extrusion oils.

Research or laboratory facility means a facility whose primary purpose is for research and development of new processes and products, that is conducted under the close supervision of technically trained personnel, and is not engaged in the manufacture of final or intermediate products for commercial purposes, except in a de minimis manner.

Responsible official means responsible official as defined in 40 CFR 70.2.

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

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

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

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

Tileboard means hardboard that meets the specifications for Class I given by the standard ANSI/AHA A135.4–1995 as approved by the American National Standards Institute. The standard specifies requirements and test methods for water absorption, thickness swelling, modulus of rupture, tensile strength, surface finish, dimensions, squareness, edge straightness, and moisture content for five classes of hardboard. Tileboard is also known as Class I hardboard or tempered hardboard.

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

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

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

Volume fraction of coating solids means the ratio of the volume of coating solids (also known as volume of nonvolatiles) to the volume of coating; liters of coating solids per liter of coating.

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

Wood building product means any product that contains more than 50 percent by weight wood or wood fiber, excluding the weight of any glass components, and is used in the construction, either interior or exterior, of a residential, commercial, or institutional building.

Tables to Subpart QQQQ of Part 63

TABLE 1 TO SUBPART QQQQ OF PART 63.—EMISSION LIMITS FOR NEW ORRECONSTRUCTED AFFECTED SOURCES

[You must comply with the emission limits that apply to your affected source in the following table as required by § 63.4690]

If the affected source applies coating to products in the following subcategory. . .	Then, the organic HAP emission limit for the affected source, in gramsHAP/liter solids (lb HAP/gal solids)[1,2] is:
1. Exterior siding and primed doorskins.	0 (0.00)
2. Flooring	0 (0.00)
3. Interior wall paneling or tileboard.	5 (0.04)
4. Other interior panels	0 (0.00)
5. Doors, windows, and miscellaneous.	57 (0.48)

[1] Determined as a rolling 12-month emission rate according to the requirements in § 63.4741, § 63.4751, or § 63.4761, as applicable.

[2] If the affected source applies coatings to products in more than one of the subcategories listed in the table, then you must determine the applicable emission limit according to § 63.4690(c).

TABLE 2 TO SUBPART QQQQ OF PART 63.—EMISSION LIMITS FOR EXISTING AFFECTED SOURCES

[You must comply with the emission limits that apply to your affected source in the following table as required by § 63.4690]

If the affected source applies coating to products in the following subcategory. . .	Then, the organic HAP emission limit for the affected source, in gramsHAP/liter solids (lb HAP/gal solids) [1,2] is:
1. Exterior siding and primed doorskins.	7 (0.06)
2. Flooring	93 (0.78)
3. Interior wall paneling or tileboard.	183 (1.53)
4. Other interior panels	20 (0.17)
5. Doors, windows, and miscellaneous.	231 (1.93)

[1] Determined as a rolling 12-month emission rate according to the requirements in § 63.4741, § 63.4751, or § 63.4761, as applicable.

[2] If the affected source applies coatings to products in more than one of the subcategories listed in the table, then you must determine the applicable emission limit according to § 63.4690(c).

TABLE 3 TO SUBPART QQQQ OF PART 63.—OPERATING LIMITS IF USING THE EMISSION RATE WITH ADD-ON CONTROLS OPTION

[If you are required to comply with operating limits by § 63.4692, you must comply with the applicable operating limits in the following table]

For the following device . . .	You must meet the following operating limit . . .	And you must demonstrate continuous compliance with the operating limit by . . .
1. Thermal oxidizer	a. The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to § 63.4767(a).	i. Collecting the combustion temperature data according to § 63.4768(c); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour block average combustion temperature at or above the temperature limit.
2. Catalytic oxidizer	a. The average temperature difference measured across the catalyst bed in any 3-hour period must not fall below the limit established according to § 63.4767(b); or	i. Collecting the temperature data according to § 63.4768(c); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour block temperature difference across the catalyst bed at or above the temperature limit.
	b. Ensure that the inlet temperature of the catalyst bed in any 3-hour period does not fall below the temperature limit established according to § 63.4767(b)(2) and develop and implement an inspection and maintenance plan according to § 63.4767(b)(3) and (4).	i. Collecting the temperature data according to § 63.4768(c), reducing the data to 3-hour block averages, and maintaining the 3-hour average temperature at or above the temperature limit; and ii. Complying with the inspection and maintenance plan developed according to § 63.4767(b)(3) and (4).
3. Carbon absorber	a. The total regeneration desorbing gas (*e.g.,* steam or nitrogen) mass flow for each carbon bed regeneration cycle must not fall below the total regeneration desorbing gas mass flow limit established according to § 63.4767(c).	i. Measuring the total regeneration desorbing gas (*e.g.,* steam or nitrogen) mass flow for each regeneration cycle according to § 63.4768(d); and ii. Maintaining the total regeneration desorbing gas mass flow at or above the mass flow limit.
	b. The temperature of the carbon bed, after completing each regeneration and any cooling cycle, must not exceed the carbon bed temperature limit established according to § 63.4767(c).	i. Measuring the temperature of the carbon bed, after completing each regeneration and any cooling cycle, according to § 63.4768(d); and ii. Operating and carbon beds such that each carbon bed is not returned to service until completing each regeneration and any cooling cycle until the recorded temperature of the carbon bed is at or below the temperature limit.
4. Condenser	a. The average condenser outlet (product side) gas temperature in any 3-hour period must not exceed the temperature limit established according to § 63.4767(d).	i. Collecting the condenser outlet (product side) gas temperature according to § 63.4768(e); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour block average gas temperature at the outlet at or below the temperature limit.
5. Emission capture system that is a PTE according to § 63.4765(a).	a. The direction of the air flow at all times must be into the enclosure; and either.	i. Collecting the direction of the air flow; and either the facial velocity of air through all natural draft openings according to § 63.4768(g)(1) or the pressure drop across the enclosure according to § 63.4768(g)(2); and ii. Maintaining the facial velocity of air flow through all natural draft openings or the pressure drop at or above the facial velocity limit or pressure drop limit, and maintaining the direction of air flow into the enclosure at all times.
	b. The average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minute; or	i. See items 5.a.i and 5.a.ii.
	c. The pressure drop across the enclosure must be at least 0.007 inch H_2O, as established in Method 204 of appendix M to 40 CFR part 51.	i. See items 5.a.i and 5.a.ii.
6. Emission capture system that is not a PTE according to § 63.4765(a).	a. The average gas volumetric flow rate or duct static pressure in each duct between a capture device and add-on control device inlet in any 3-hour period must not fall below the average volumetric flow rate or duct static pressure limit established for that capture device according to § 63.4767(f).	i. Collecting the gas volumetric flow gas or duct static pressure for each capture device according to § 63.4768(g); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour block average gas volumetric flow rate or duct static pressure for each capture device at or above the gas volumetric flow rate or duct static pressure limit
7. Concentrators, including zeolite wheels and rotary carbon absorbers.	The average gas temperature of the desorption concentrate stream in any 3-hour period must not fall below the limit established according to § 63.4767(e); and	i. Collecting the temperature data according to § 63.4768(f); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour block average temperature at or above the temperature limit.

TABLE 3 TO SUBPART QQQQ OF PART 63.—OPERATING LIMITS IF USING THE EMISSION RATE WITH ADD-ON CONTROLS OPTION—Continued

[If you are required to comply with operating limits by § 63.4692, you must comply with the applicable operating limits in the following table]

For the following device . . .	You must meet the following operating limit . . .	And you must demonstrate continuous compliance with the operating limit by . . .
	b. The average pressure drop of the dilute stream across the concentrator in any 3-hour period must not exceed the limit established according to § 63.4767(e).	i. Collecting the pressure drop data according to § 63.4768(f); and ii. Reducing the pressure drop data to 3-hour block averages; and iii. Maintaining the 3-hour block average pressure drop at or below at the pressure drop limit.

TABLE 4 TO SUBPART QQQQ OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART QQQQ OF PART 63

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

Citation	Subject	Applicable to subpart QQQQ	Explanation
§ 63.1(a)(1)–(14)	General Applicability	Yes.	
§ 63.1(b)(1)–(3)	Initial Applicability Determination	Yes	Applicability to subpart QQQQ is also specified in § 63.4681.
§ 63.1(c)(1)	Applicability After Standard Established.	Yes.	
§ 63.1(c)(2)–(3)	Applicability of Permit Program for Area Sources.	No	Area sources are not subject to subpart QQQQ.
§ 63.1(c)(4)–(5)	Extensions and Notifications	Yes.	
§ 63.1(e)	Applicability of Permit Program Before Relevant Standard is Set.	Yes.	
§ 63.2	Definitions	Yes	Additional definitions are specified in § 63.4781.
§ 63.3(a)–(c)	Units and Abbreviations	Yes.	
§ 63.4(a)(1)–(5)	Prohibited Activities	Yes.	
§ 63.4(b)–(c)	Circumvention/Severability	Yes.	
§ 63.5(a)	Construction/Reconstruction	Yes.	
§ 63.5(b)(1)–(6)	Requirements for Existing, Newly Constructed, and Reconstructed Sources.	Yes.	
§ 63.5(d)	Application for Approval of Construction/Reconstruction.	Yes.	
§ 63.5(e)	Approval of Construction/Reconstruction.	Yes.	
§ 63.5(f)	Approval of Construction/Reconstruction Based on Prior State Review.	Yes.	
§ 63.6(a)	Compliance With Standards and Maintenance Requirements—Applicability.	Yes.	
§ 63.6(b)(1)–(7)	Compliance Dates for New and Reconstructed Sources.	Yes	§ 63.4683 specifies the compliance dates.
§ 63.6(c)(1)–(5)	Compliance Dates for Existing Sources.	Yes	§ 63.4683 specifies the compliance dates.
§ 63.6(e)(1)–(2)	Operation and Maintenance	Yes.	
§ 63.6(e)(3)	SSMP	Yes	Only sources using an add-on control device to comply with the standard must complete SSMP.
§ 63.6(f)(1)	Compliance Except During SSM	Yes	Applies only to sources using an add-on control device to comply with the standard.
§ 63.6(f)(2)–(3)	Methods for Determining Compliance.	Yes.	
§ 63.6(g)(1)–(3)	Use of an Alternative Standard	Yes.	
§ 63.6(h)	Compliance With Opacity/Visible Emission Standards.	No	Subpart QQQQ does not establish opacity standards and does not require continuous opacity monitoring systems (COMS).
§ 63.6(i)(1)–(16)	Extension of Compliance	Yes.	
§ 63.6(j)	Presidential Compliance Exemption	Yes.	
§ 63.7(a)(1)	Performance Test Requirements—Applicability.	Yes	Applies to all affected sources. Additional requirements for performance testing are specified in §§ 63.4764, 63.4765, and 63.4766.

TABLE 4 TO SUBPART QQQQ OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART QQQQ OF PART 63—Continued

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

Citation	Subject	Applicable to subpart QQQQ	Explanation
§ 63.7(a)(2)	Performance Test Requirements—Dates.	Yes	Applies only to performance tests for capture system and control device efficiency at sources using these to comply with the standard. § 63.4760 specifies the schedule for performance test requirements that are earlier than those specified in § 63.7(a)(2).
§ 63.7(a)(3)	Performance Tests Required By the Administrator.	Yes.	
§ 63.7(b)–(e)	Performance Test Requirements—Notification, Quality Assurance, Facilities Necessary for Safe Testing, Conditions During Test.	Yes	Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standard.
§ 63.7(f)	Performance Test Requirements—Use of Alternative Test Method.	Yes	Applies to all test methods except those used to determine capture system efficiency.
§ 63.7(g)–(h)	Performance Test Requirements—Data Analysis, Recordkeeping, Reporting, Waiver of Test.	Yes	Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standard.
§ 63.8(a)(1)–(3)	Monitoring Requirements—Applicability.	Yes	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standard. Additional requirements for monitoring are specified in § 63.4768.
§ 63.8(a)(4)	Additional Monitoring Requirements	No	Subpart QQQQ does not have monitoring requirements for flares.
§ 63.8(b)	Conduct of Monitoring	Yes.	
§ 63.8(c)(1)–(3)	Continuous Monitoring System (CMS) Operation and Maintenance.	Yes	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standard.Additional requirements for CMS operations and maintenance are specified in § 63.4768.
§ 63.8(c)(4)	CMSs	No	§ 63.4768 specifies the requirements for the operation of CMS for capture systems and add-on control devices at sources using these to comply.
§ 63.8(c)(5)	COMS	No	Subpart QQQQ does not have opacity for visible emission standards.
§ 63.8(c)(6)	CMS Requirements	No	§ 63.4768 specifies the requirements for monitoring systems for capture systems and add-on control devices at sources using these to comply.
§ 63.8(c)(7)	CMS Out-of-Control Periods	Yes.	
§ 63.8(c)(8)	CMS Out-of-Control Periods Reporting.	No	§ 63.4720 requires reporting of CMS out-of-control periods.
§ 63.8(d)–(e)	Quality Control Program and CMS Performance Evaluation.	No	Subpart QQQQ does not require the use of continuousemissions monitoring systems.
§ 63.8(f)(1)–(5)	Use of an Alternative Monitoring Method.	Yes.	
§ 63.8(f)(6)	Alternative to Relative Accuracy Test.	No	Subpart QQQQ does not require the use of continuous emissions monitoring systems.
§ 63.8(g)(1)–(5)	Data Reduction	No	§§ 63.4767 and 63.4768 specify monitoring data reduction.
§ 63.9(a)–(d)	Notification Requirements	Yes.	
§ 63.9(e)	Notification of Performance Test	Yes	Applies only to capture system and add-on controldevice performance tests at sourcesusing these to comply with the standard.
§ 63.9(f)	Notification of Visible Emissions/Opacity Test.	No	Subpart QQQQ does not have opacity or visible emission standards.
§ 63.9(g)(1)–(3)	Additional Notifications When Using CMS.	No	Subpart QQQQ does require the use of continuous emissions monitoring systems.
§ 63.9(h)	Notification of Compliance Status	Yes	§ 63.4710 specifies the dates for submitting the notification of compliance status.
§ 63.9(i)	Adjustment of Submittal Deadlines	Yes.	
§ 63.9(j)	Change in Previous Information	Yes.	
§ 63.10(a)	Recordkeeping/Reporting—Applicability and General Information.	Yes.	
§ 63.10(b)(1)	General Recordkeeping Requirements.	Yes	Additional requirements are specified in §§ 63.4730 and63.4731.
§ 63.10(b)(2)(i)–(v)	Recordkeeping Relevant to SSM Periods and CMS.	Yes	Requirements for SSM records only apply to add-on control devices used to comply with the standard.
§ 63.10(b)(2)(vi)–(xi)		Yes.	

TABLE 4 TO SUBPART QQQQ OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART QQQQ OF PART 63—Continued

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

Citation	Subject	Applicable to subpart QQQQ	Explanation
§ 63.10(b)(2)(xii)	Records	Yes.	
§ 63.10(b)(2)(xiii)		No	Subpart QQQQ does not require the use of continuous emissions monitoring systems.
§ 63.10(b)(2)(xiv)		Yes.	
§ 63.10(b)(3)	Recordkeeping Requirements for Applicability Determinations.	Yes.	
§ 63.10(c)(1)–(6)	Additional Recordkeeping Requirements for Sources with CMS.	Yes.	
§ 63.10(c)(7)–(8)		No	The same records are required in § 63.4720(a) (7).
§ 63.10(c)(9)–(15)		Yes.	
§ 63.10(d)(1)	General Reporting Requirements	Yes	Additional requirements are specified in § 63.4720.
§ 63.10(d)(2)	Report of Performance Test Results	Yes	Additional requirements are specified in § 63.4720(b).
§ 63.10(d)(3)	Reporting Opacity or Visible Emissions Observations.	No	Subpart QQQQ does not require opacity or visible emissions observations.
§ 63.10(d)(4)	Progress Reports for Sources With Compliance Extensions.	Yes.	
§ 63.10(d)(5)	SSM Reports	Yes	Applies only to add-on control devices at sources using these to comply with the standard.
§ 63.10(e)(1)–(2)	Additional CMS Reports	No	Subpart QQQQ does not require the use of continuous emissions monitoring systems.
§ 63.10(e)(3)	Excess Emissions/CMS Performance Reports.	No	§ 63.4720(b) specifies the contents of periodic compliance reports.
§ 63.10(e)(4)	COMS Data Reports	No	Subpart QQQQ does not specify requirements for opacity or COMS.
§ 63.10(f)	Recordkeeping/Reporting Waiver	Yes.	
§ 63.11	Control Device Requirements/Flares.	No	Subpart QQQQ does not specify use of flares for compliance.
§ 63.12	State Authority and Delegations	Yes.	
§ 63.13	Addresses	Yes.	
§ 63.14	Incorporation by Reference	Yes	Test Methods ANSI/ASME PTC 19.10–1981, Part 10, ASTM D2697–86 (Reapproved 1998), and ASTM D6093–97 (incorporated by reference, see § 63.14).
§ 63.15	Availability of Information/Confidentiality.	Yes.	

TABLE 5 TO SUBPART QQQQ OF PART 63.—DEFAULT ORGANIC HAP MASS FRACTION FOR SOLVENTS AND SOLVENT BLENDS

[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]

Solvent/solvent blend	CAS. No.	Average organic HAP mass fraction	Typical organic HAP, percent by mass
1. Toluene	108–88–3	1.0	Toluene.
2. Xylene(s)	1330–20–7	1.0	Xylenes, ethylbenzene.
3. Hexane	110–54–3	0.5	n-hexane.
4. n-Hexane	110–54–3	1.0	n-hexane.
5. Ethylbenzene	100–41–4	1.0	Ethylbenzene.
6. Aliphatic 140		0	None.
7. Aromatic 100		0.02	1% xylene, 1% cumene.
8. Aromatic 150		0.09	Naphthalene.
9. Aromatic naphtha	64742–95–6	0.02	1% xylene, 1% cumene.
10. Aromatic solvent	64742–94–5	0.1	Naphthalene.
11. Exempt mineral spirits	8032–32–4	0	None.
12. Ligroines (VM & P)	8032–32–4	0	None.
13. Lactol spirits	64742–89–6	0.15	Toluene.
14. Low aromatic white spirit	64742–82–1	0	None.
15. Mineral spirits	64742–88–7	0.01	Xylenes.
16. Hydrotreated naphtha	64742–48–9	0	None.
17. Hydrotreated light distillate	64742–47–8	0.001	Toluene.
18. Stoddard solvent	8052–41–3	0.01	Xylenes.
19. Super high-flash naphtha	64742–95–6	0.05	Xylenes.
20. Varsol ® solvent	8052–49–3	0.01	0.5% xylenes, 0.5% ethylbenzene.
21. VM & P naphtha	64742–89–8	0.06	3% toluene, 3% xylene.

TABLE 5 TO SUBPART QQQQ OF PART 63.—DEFAULT ORGANIC HAP MASS FRACTION FOR SOLVENTS AND SOLVENT BLENDS—Continued

[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]

Solvent/solvent blend	CAS. No.	Average organic HAP mass fraction	Typical organic HAP, percent by mass
22. Petroleum distillate mixture	68477–31–6	0.08	4% naphthalene, 4% biphenyl.

TABLE 6 TO SUBPART QQQQ OF PART 63.—DEFAULT ORGANIC HAP MASS FRACTION FOR PETROLEUM SOLVENT GROUPS [a]

[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]

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 5 to this subpart and you only know whether the blend is aliphatic or aromatic.

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

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

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