ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[AD–FRL–7244–1]

National Emission Standards for Hazardous Air Pollutants: Surface Coating of Large Appliances

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates national emission standards for hazardous air pollutants (NESHAP) for existing and new facilities that apply surface coatings to large appliances. These final standards implement section 112(d) of the Clean Air Act (CAA) which requires the Administrator to regulate emissions of hazardous air pollutants (HAP) listed in section 112(b) of the CAA. The intent of the standards is to protect the public by requiring new and existing major sources to control emissions to the level attainable by implementing the maximum achievable control technology (MACT).

Sources typically emit the following HAP: glycol ethers, methylene diphenyl diisocyanate, methyl ethyl ketone, toluene, and xylene. These compounds account for over 80 percent of the nationwide HAP emissions from this source category. These pollutants can cause reversible or irreversible toxic effects to people following exposure.

EFFECTIVE DATE: This rule is effective July 23, 2002. The incorporation by reference of certain publications listed in today's final rule is approved by the Director of the Federal Register as of July 23, 2002.

ADDRESSES: *Docket.* Docket No. A–97–41 contains supporting information used in developing the standards for the Large Appliances Coating source category. The docket is located at the U.S. EPA, 401 M Street, SW, Washington, DC 20460 in Room M–1500, Waterside Mall (ground floor), telephone (202) 260–7548. The docket may be inspected from 8:30 a.m. to 5:30 p.m., Monday through Friday, excluding legal holidays.

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, North Carolina 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 ''Large Appliances Surface Coating Operations—Background Information for Promulgated Standards'' (EPA–453/R–02–004). The promulgation BID contains a summary of changes made to the standards since proposal, public comments made on the proposed standards, and the EPA responses to the comments.

FOR FURTHER INFORMATION CONTACT: For information concerning applicability and rule determinations, contact your State or local air pollution control agency representative or the appropriate EPA Regional Office representative. For information concerning the analyses performed in developing these standards, contact Mr. H. Lynn Dail, Coatings and Consumer Products Group, Emission Standards Division (C539–03), U.S. EPA, Research Triangle Park, NC 27711, telephone (919) 541–2363; e-mail address: *dail.lynn@epa.gov.*

SUPPLEMENTARY INFORMATION:

Docket. The docket is an organized and complete file of all the information considered by EPA in the development of rulemaking. The docket is a dynamic file because material is added throughout the rulemaking process. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. The contents of the docket, including the BID for the proposed and promulgated standards and the EPA responses to significant comments will serve as the record in case of judicial review. (See section 307(d)(7)(A) of the CAA.) The regulatory text and other materials related to today's final rule are available for review in the docket, or copies may be mailed on request from the Air and Radiation Docket and Information Center by calling (202) 260–7548. A reasonable fee may be charged for copying docket materials. *Worldwide Web (WWW).* In addition to being available in the docket, an electronic copy of today's final rule will also be available on the WWW through the Technology Transfer Network (TTN). Following signature by the EPA Administrator, a copy of the final rule will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at *http://www.epa.gov/ttn/oarpg.* The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541–5384.

Regulated Entities. If your facility applies surface coatings to large appliance parts or products, you may be a regulated entity. Categories and entities potentially regulated by the final standards are shown in the following table. This table is slightly different from the table contained in the proposal preamble at 65 FR 81135. The changes made to the table between proposal and promulgation are the result of public comments. These changes clarify the types of facilities that will be affected by the promulgated standards.

CATEGORIES AND ENTITIES POTENTIALLY REGULATED BY THE FINAL STANDARDS

Category	NAICS Code [a]	Regulated Entities [b]
Industry	335221	Household cooking equipment.
	335222	Household refrigerators and freezers.
	335224	Household laundry equipment.
	335228	Other major household appliances.
	333312	Commercial laundry, drycleaning, and pressing equipment.
	333415	Air-conditioners (except motor vehicle), comfort furnaces, and industrial refrigeration units and freezers (except heat transfer coils and large commercial and industrial chillers).
	[c]333319	Other commercial/service industry machinery, e.g., commercial dishwashers, ovens, and ranges, etc.
Federal Government		Not affected.
State/Local/Tribal Government		Not affected.

[a] North American Industry Classification System
[b] Regulated entities means major source facilities that apply surface coatings to these parts or products.
[c] Excluding special industry machinery, industrial and commercial machinery and equipment, and electrical machinery equipment and supplies not elsewhere classified.

As in the proposal, major sources classified under other NAICS codes will be subject to the standards if they perform large appliance surface coating operations and meet the other applicability criteria. Conversely, some facilities listed under these codes may not be affected because some of the codes in the table cover products that are not defined as large appliances for the purposes of the rule.

This table is not intended to be exhaustive, but rather provides a guide for entities likely to be regulated by this action. To determine whether your facility is subject to the rule, you should carefully examine the applicability criteria in § 63.4081 of the rule. If you have questions regarding how this action applies to a particular entity, consult the appropriate EPA Regional Office representative.

Judicial Review. The NESHAP for large appliance surface coating operations was proposed on December 22, 2000 (65 FR 81134). Under section 307(b)(1) of the CAA, judicial review of NESHAP is available only by the filing of a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by September 23, 2002. Only those objections to the rule which were raised with reasonable specificity during the period for public comment may be raised during judicial review. Under section 307(b)(2) of the CAA, the requirements that are the subject of today's final rule may not be challenged later in civil or criminal proceedings brought by EPA to enforce the requirements.

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

I. Background
A. What is the source of authority for development of NESHAP?
B. What criteria do we use in the development of NESHAP?
II. What changes and clarifications have we made to the proposed standards?
A. Scope of Source Category
B. Definitions
C. Overlap with Other NESHAP Categories
D. Other Changes and Clarifications
III. What are the final standards?
A. What is the source category?
B. What is the affected source?
C. What are the emission limits?
D. What are the testing and initial and continuous compliance requirements?
E. What are the notification, recordkeeping, and reporting requirements?
IV. What are the environmental, energy, cost, and economic impacts?
A. What are the air impacts?
B. What are the non-air health, environmental, and energy impacts?
C. What are the cost and economic impacts?
V. What are the administrative requirements?
A. Executive Order 12866, Regulatory Planning and Review
B. Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks
C. Executive Order 13132, Federalism
D. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments
E. Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
F. Unfunded Mandates Reform Act of 1995
G. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 *et seq.*
H. Paperwork Reduction Act
I. National Technology Transfer and Advancement Act
J. Congressional Review Act

I. Background

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

Section 112 of the CAA requires us to list categories and subcategories of major sources and area sources of HAP and to establish NESHAP for the listed source categories and subcategories. The category of major sources covered by the final NESHAP was listed on July 16, 1992 (57 FR 31576) under the Surface Coating Processes industry group. Major sources of HAP are those that have the potential to emit considering controls, in the aggregate, 10 tons per year (tpy) or more of any HAP or 25 tpy or more of any combination of HAP.

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

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

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

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

II. What Changes and Clarifications Have We Made to the Proposed Standards?

In response to public comments received on the proposed standards, we made several changes in developing the final rule. While some of the changes were designed to make our intentions clearer, other changes had a direct effect on the degree of coverage of the standards. The substantive comments and our responses and rule changes are summarized in the following sections. A more detailed summary can be found in the BID for the final rule which is available from several sources (see **ADDRESSES**).

A. Scope of Source Category

In the proposal, we defined the regulated community for the standards to be facilities that apply surface coatings to large appliances or components of large appliances. In the proposal BID and the table of regulated entities in the proposal preamble (65 FR 81135, December 22, 2000), we stated that the facilities are generally included under the following NAICS codes (and their SIC code equivalents): 335221 (3631) household cooking appliances, 335222 (3632) household refrigerator and home freezer, 335224 (3633) householdlaundry equipment manufacturing, 335228 (3639) other major household appliances, 333415 (3585) air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment, and 333319 (3589) service appliance. We cautioned that some facilities and products with these codes do not fit under the large appliance category, and similarly, there may be facilities under other codes that do in fact coat large appliances. Thus, these industrial codes were given as a guide but were not intended to be used as the only basis for determining applicability of the rule.

The codes listed above are associated with household cooking equipment, refrigerators/freezers, laundry equipment, and floor vacuums and polishers, and various types of

commercial and industrial heating, ventilation, and refrigeration equipment. Table 2–1 in the proposal BID listed examples of large appliances that are produced by facilities in these categories.

Several commenters stated that the scope of the category as proposed was overly broad and confusing. They felt that we had included several products not normally considered to be large appliances, and that these products should be regulated under the miscellaneous metal parts and products NESHAP currently under development. As an alternative, if EPA decided not to change the mix of products defined to be large appliances, one commenter suggested that we change the name of the source category to better match the product mix being represented.

In addition, commenters asked for clarification on the applicability of the rule to certain coatings such as porcelain enamel, powder coatings, and asphalt interior soundproofing. The final rule clarifies that the aforementioned coatings are considered coatings for the purposes of the rule and will be subject to subpart NNNN. We also clarified that phosphating (a form of pretreatment) and metal plating are excluded as coatings in subpart NNNN.

Our proposed definition of the large appliances source category was formed using the six SIC/NAICS codes as a foundation, and then including the products under those codes that we believed should be included as large appliances. Some commenters expressed confusion when comparing the preamble table to BID Table 2–1. We have clarified the scope of the source category by including definitions for *large appliance product* and *large appliance part* in the final rule. The definitions list the parts and products intended to be regulated under the final rule, and they supercede the listing in Table 2–1 of the proposal BID. We also modified the proposal preamble table and are including it in the BID for the final rule. We have added Commercial Laundry Equipment and have deleted Floor Waxing/Polishing and Motor Vehicle Air-Conditioning, in keeping with our intent at proposal. In addition, we have also deleted heat transfer coils and large commercial and industrial chillers from the table and from coverage by the large appliances NESHAP.

A few commenters stated that the heat transfer coils used to cool fluids in refrigeration and air-conditioning systems typically have unique coating formulation requirements, and suitable coatings are not available in a low-HAP formulation. The need for special coatings arises from the complex geometry of heat transfer coils, as well as exposure requirements in food processing and other special environments. The coating information we collected and used to determine the MACT floor did not contain coatings used specifically for heat transfer coils. The commenters asked that this large appliance component be removed from the large appliances category and regulated under the miscellaneous metal parts and products NESHAP.

We have examined the submitted data and arguments and have concluded that the data analyzed since proposal offer sufficient justification to revise the scope of the source category. Therefore, we have excluded heat transfer coils from coverage under the large appliances NESHAP.

A trade organization and one manufacturer of large commercial and industrial chillers (equipment that produces chilled water for use in a number of industrial processes including heating, ventilating, and air conditioning (HVAC) applications) commented that large chillers are very different from other products included as large appliances. They said that large HVAC products are produced in much lower volumes than white goods and are often custom designed. Furthermore, they are often subjected to outdoor environments requiring that they meet strict performance criteria, and they have a longer expected life. Commercial and industrial chillers are much larger than most other large appliances and are painted after assembly. Therefore, they cannot be put through a baking oven to cure the coatings, which restricts the coatings available for use.

We requested additional supporting data on large chiller equipment coating operations and the available coatings. We also visited one of the few facilities that manufactures that equipment. Our evaluation of the chiller coating operations led us to determine that large commercial and industrial chillers should be excluded from the Large Appliances category for the reasons described by the commenter.

B. Definitions

We have added definitions for *large appliance product* and *large appliance part* to the final rule. These definitions include ''white goods'' appliances, as well as certain HVAC equipment used in commercial and industrial applications. However, specifically excluded from the definition of *large appliance product* are heat transfer coils, large commercial and industrial chillers, and motor vehicle air-conditioning units.

We added several other new definitions in response to comments and to increase the clarity of the rule. Newly defined terms include *adhesive, facility maintenance, heat transfer coil, large commercial and industrial chillers*, and *month*. Clarifying changes were also made to the proposed definitions for *coating operation*, *manufacturer's formulation data*, and *surface preparation*.

C. Overlap With Other NESHAP Categories

Several commenters requested that the final rule provide compliance flexibility for facilities that coat a variety of items in addition to large appliances or large appliance components. Such facilities may be affected by several coating NESHAP, such as the standards for large appliances, miscellaneous metal parts and products, and plastic parts and products. They sought a regulatory approach that would allow facilities to opt specific coating operations or product lines, that are collateral to large appliance coating operations, out of the rule and into either the miscellaneous metal parts and products rule under development or the plastic parts and products rule that is also under development. Commenters also believed that plants coating types of items with a wider use beyond large appliances (such as motors, handles, hinges, etc.) should have the choice of those operations being covered by either the miscellaneous metal or plastic parts rule, even if the specific items are designed to be used on large appliances.

We understand that many facilities may find it beneficial to consolidate their regulatory coverage for a number of different types of coating operations (such as large appliances, miscellaneous metal parts, and plastic parts) into a single NESHAP. Consolidation may reduce the amount of records, reports, or compliance calculations that the facility would have to maintain. To address the issue of multiple regulatory coverage, we are including a new provision in the final rule that allows the consolidation sought by the commenters. Under this approach, as an alternative to complying separately with multiple coating NESHAP, a facility may choose to be subject to the requirements of only one applicable NESHAP, provided it is the most stringent of the applicable subparts. The test for stringency is a demonstration that the facilitywide HAP emissions from all surface coating operations will be less than or equal to the emissions achieved by complying separately with

all applicable subparts of 40 CFR part 63.

There are many facilities that apply surface coatings to a variety of items that may be used on large appliances, but which also have application to other types of products. We agree that such multi-purpose items are not exclusively large appliance parts and may be considered more appropriately miscellaneous metal parts or plastic parts. Therefore, we are excluding these items from coverage under the final rule. However, if a large appliance source prefers to have all its coating operations subject to only one coating NESHAP to consolidate recordkeeping and reporting requirements, the source would have the option described above of complying with only the most stringent applicable NESHAP.

D. Other Changes and Clarifications

A number of commenters found the proposed compliance options confusing and some suggested variations on the way these options should be applied.

One of the commenters believed that the calculations, monthly compliance determinations, and recordkeeping required under the compliant material option should not apply to coating operations that use only powder coatings that contain no HAP. The commenter suggested relevant portions of the proposed requirements that he believed should not be applicable to these powder coating operations.

We have reviewed the proposed calculations, compliance determinations, and recordkeeping requirements for the compliant material option and believe the commenter identified a need to clarify the rule language. The proposed language would have required an affected source choosing the compliant material option and using only powder coatings and non-HAP cleaning materials to determine the mass fraction of organic HAP, the volume fraction of solids, and the density for each coating, and then to determine the ratio of organic HAP to coating solids. Records and certain reports would have had to include such calculations. We did not intend to require this unnecessary calculation for non-HAP coatings at proposal. Clearly, if a coating contains no organic HAP, it is not useful to record and report such calculations since the result is obviously zero kilogram (kg) organic HAP per liter of coating solids. Therefore, we have added a provision in § 63.4141(a) and (d) of the final rule specifying that if the mass fraction of organic HAP in a coating is zero, as determined according to § 63.4141(a) (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. This new provision applies to all types of coatings that contain no organic HAP, not just powder coatings. For such a coating, § 63.4141(d) of the final rule specifies that the organic HAP content equals zero and no calculation is required. The following notification, reporting, and recordkeeping sections of the rule were also revised to fully incorporate this provision: §§ 63.4110(b)(8) and (b)(8)(i), 63.4120(d)(2), and 63.4130(c), (c)(1), (f), and (g). We believe that these changes are responsive to the commenter's concerns, and that they retain only the requirements that are essential for compliance and enforcement purposes.

Some commenters asked whether different compliance options could be combined for the same coating operation in order for sources to gain more flexibility in the way coatings and other materials are used in an operation. We proposed three compliance options: Option 1 when using compliant materials, Option 2 when determining emission rate without add-on controls, and Option 3 when using emission controls. The three proposed compliance options address different situations and were intended to be applied on a one-at-a-time basis (see § 63.4091 introductory language). Both Options 1 and 2 cannot logically be used on one coating operation at the same time. If all coatings meet the limit and all thinners and cleaners are HAP-free, then Option 1 could be used and, thus, there would be no need to combine data elements for multiple coatings, thinners, and cleaning materials to derive an emission rate (required for Option 2). If the coatings, thinners, and cleaning materials do not meet the Option 1 criteria, or if the source owner or operator chooses not to use Option 1, then Option 2 must be used (or Option 3 if an add-on control device is in use). In no case may coatings, thinners, and cleaning materials accounted for under one option be included in the accounting under another option. Because the compliance options are designed to accommodate different situations and, due to the lack of compelling information or justification for the commenter's suggested rule change, the final compliance option provisions are the same as proposed.

Additionally, one commenter believed that a clarification was needed for proposed § 63.4081(a)(3), which excluded certain categories of surface coating from coverage by the rule, such as facility maintenance operations. The commenter wanted the rule to make specific mention of the paint booths that are used for maintaining manufacturing equipment. We agree with the commenter that the rule should not apply to paint booths or to other surface coating equipment used exclusively to coat something other than large appliances. If, however, the paint booth or equipment is sometimes used for large appliance surface coating, it would be subject to the standards during those times and would need to be considered part of the affected source. It also is subject to the standards if it is used for cleaning of equipment used in coating operations, e.g., application equipment, hangers, and racks (see § 63.4081(c)(6) and the definition of coating operation in § 63.4181). To clarify our intent, we have included the following definition of facility maintenance in the final rule: *Facility maintenance* means the routine repair or refurbishing (including surface coating) of the tools, equipment, machinery, and structures that comprise the infrastructure of a facility or that are necessary for the facility to function in its intended capacity. It does not mean cleaning of equipment that is part of a large appliances coating operation.

One commenter suggested that EPA establish a low-use exemption threshold for military installations where military members could apply coatings at on-base hobby shops and housing areas to repair personally owned appliances. Generally, in hobby shops, the prevailing coating application would involve hand-held, non-refillable aerosol containers. However, individuals using hobby shop facilities may also apply the coatings by methods other than hand-held aerosol cans. In the proposal, we excluded hand-held aerosol container coatings from the rule but did not exclude other coating application methods, specifically those related to hobby shops. However, in considering this comment, we concluded that coating application by individuals who repair, refurbish, or recoat large appliances or other types of products at military hobby shops or base housing areas does not compare to the coating operations conducted at facilities that apply coatings as a step in the production of large appliances. Therefore, these coating activities are not subject to the standards. We believe that expanding the exclusion in § 63.4081(d)(4) to include hobby shops is a more appropriate way to address this issue than creating a low-use exemption that would necessitate coating usage recordkeeping at the hobby shop. Therefore, § 63.4081(d)(4) of the final rule excludes research or

laboratory facilities; janitorial, building, and facility maintenance operations; hobby shops operated for non-commercial purposes; and the use of hand-held, non-refillable aerosol containers.

In addition to the changes described above, we noted several areas of the proposed rule that warrant revision even though commenters did not object to them. The changes are necessary so that the provisions properly reflect our intent and are consistent with other surface coating NESHAP under development. As proposed, § 63.4100(a)(2) indicated that affected sources using the emission rate with add-on controls options would not have to comply with the standards during periods of startup, shutdown, and malfunction. This provision is often found in NESHAP in which compliance with the standards is based solely on the results of a short-term initial performance test and short-term averaging of continuous monitoring results thereafter. After proposal of the large applicances NESHAP, we realized that this provision is not appropriate for the surface coating NESHAP when these short-term test and monitoring results are only one component of a compliance determination that determines emissions over a long period of time, which in this case is a month. For the large appliances NESHAP, the source owner or operator will use the performance test and continuous monitoring results in combination with data on coatings and other materials used over a month's period of time. These components will be combined to calculate a monthly organic HAP emission rate. Since there may be many startups and shutdowns of a coating operation over the course of a month as part of normal operation, it is not appropriate to exempt such periods from compliance with the standards. The rule does require in § 63.4100(d) that you develop and operate according to a startup, shutdown, and malfunction plan, and § 63.6163(h) provides the following: ''Consistent with §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction of the emission capture system, add-on control device, or coating operation that may affect emission capture or control device efficiency are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with the startup, shutdown, and malfunction plan. The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations according to the provisions in § 63.6(e).'' We believe that this provision along with a month-long compliance period that will accommodate potential short-term higher emission rates that might occur due to startup, shutdown, or malfunction are adequate and that the proposed exemption is not necessary or appropriate. Therefore, it is not included in the final standards.

Another change we made to the rule is intended to simplify the compliance provisions for the emission rate with add-on controls option. We removed § 63.4162, which was proposed to provide explicit instructions for determining compliance with the emission rate with add-on controls option when the coating operation is operated under several different operating conditions. We found after proposal, however, that this section as proposed added unnecessary complexity to the standards, and that the compliance provisions are adequate without it. Therefore, we removed it from the final standards.

To provide consistency with other surface coating NESHAP, we added provisions in § 63.4167(b)(3) and (4) to allow sources an alternative to the proposed operating limits for catalytic oxidizers that require monitoring of inlet and outlet temperature before and after the catalyst bed and the temperature difference across the bed. This alternative allows you to monitor only the temperature before the catalyst bed if you develop and follow an onsite inspection and maintenance plan for the catalytic oxidizer. For some sources, this would be a preferable alternative. Another addition we made to provide consistency is a description of continuous monitoring requirements for concentrators in § 63.4167(e) and (f) and in Table 1 to the subpart. As proposed, a source using a concentrator would have had to seek and obtain approval from the permitting authority for the continuous monitoring it wanted to use to comply with the operating limits since we did not include such monitoring provisions in the proposed standards. Because we have included these provisions in the final standards, a source can comply with them and, therefore, avoid having to apply for and obtain specific approval unless it wishes to monitor something different than what is specified in the new provisions. The concentrator monitoring requirements are the same as those in other surface coating NESHAP under development.

In addition to the revisions described above, we have made clarifying editorial changes throughout the rule to ensure it accurately expresses our intent and to promote consistency with other surface coating NESHAP currently under development. These changes do not affect the stringency of the requirements since they are only clarifications of the proposed provisions.

III. What Are the Final Standards?

A. What Is the Source Category?

The large appliances source category includes facilities that apply coatings to large appliance parts or products. The rule applies to facilities that are a major source, are located at a major source, or are part of a major source of HAP emissions. Large appliances include ''white goods'' such as ovens, refrigerators, freezers, dishwashers, laundry equipment, trash compactors, water heaters, comfort furnaces, and electric heat pumps. Large appliances also include most HVAC equipment intended for any application. However, not included in the source category are motor vehicle air-conditioning units, heat transfer coils, and large commercial and industrial chillers. Other coating operations not included in the source category are: the coating of large appliance parts that have a wider use beyond large appliances (such as handles or fasteners), repair or maintenance painting of large appliance parts or products used by a facility, the surface coating of heat transfer coils or large commercial and industrial chillers, research or laboratory facilities and facility maintenance operations, and hobby shops operated for non-commercial purposes.

B. What Is the Affected Source?

The affected source includes all of the activities that involve coatings, thinners, and cleaning materials used in large appliance coating operations. These activities include: (1) Surface preparation of the large appliance parts or products; (2) preparation of coatings for application; (3) applying the coatings; (4) flash-off, drying, or curing of the coatings; (5) cleaning of coating equipment; (6) storage of coatings, thinners, and cleaning materials; (7) conveying of these materials; and (8) handling and conveying of waste materials generated by the coating operations.

C. What Are the Emission Limits?

The emission limits are different for existing and new sources and have not changed since proposal. For an existing source, you must limit organic HAP emissions to no more than 0.13 kg/liter (1.1 pound (lb)/gallon (gal)) of coating solids used during each compliance

(monthly) period. For a new or reconstructed source, you must limit emissions to no more than 0.022 kg/liter (0.18 lb/gal) of coating solids. These limits apply to the total of all coatings, thinners, and cleaning materials used in coating operations at the affected source.

There are three compliance options available for meeting the emission limits. The compliant material option requires that each coating used in the operation meet the limit, and each thinner and cleaning material must contain no organic HAP. Under the emission rate without add-on controls option, you may average all of the coatings, thinners, and cleaning materials together and demonstrate that the overall emission rate is in compliance with the applicable limit. The emission rate with add-on controls option applies to coating operations for which add-on controls are used to meet the limit. Under this option, you must meet certain operating limits for the capture systems and control devices and follow a work practice plan for your material storage, mixing, conveying, and spills.

D. What Are the Testing and Initial and Continuous Compliance Requirements?

Existing sources will have to be in compliance no later than July 25, 2005. New and reconstructed sources will have to be in compliance by this same date or upon startup, whichever is later. The initial compliance period begins on the compliance date and ends on the last day of the first full month following this date, except that for new or reconstructed sources required to conduct performance tests the initial compliance period ends on the last day of the first full month following the test. Note that ''month'' means a calendar month or a similar pre-specified period in order to accommodate facility accounting periods. The performance test may be conducted up to 180 days after the compliance date.

As discussed earlier, the owner or operator must select one of three compliance options for each coating operation, but may change the approach used for any operation at any time. For the compliant material and emission rate without add-on controls option, you will determine the mass of organic HAP in coatings, thinners, and cleaning materials and the volume fraction of coating solids either from manufacturer's formulation data or from test results using the methods in the final rule. Alternative test methods may be used with EPA's approval, and the test method results will prevail over manufacturer's formulation data for compliance purposes. If you use the emission rate with add-on controls option, you need to determine the mass of organic HAP and volume fraction of coating solids as in the other two options and also the capture and control efficiencies of the add-on controls by means of a performance test. As part of this test, you must establish operating limits that can be used on a continuous basis to demonstrate compliance with the emission limit. The final rule specifies the parameters to monitor for the types of emission control systems commonly used in the industry. If the monitoring results indicate no deviations from the operating limits, you would assume the control system is continuing to provide the same control efficiency as demonstrated in the test. If the combination of this efficiency and the total mass of organic HAP in materials used in controlled coating operations continues to be within the applicable emission limit, then continuous compliance is shown for those operations.

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

If you are subject to the standards, you must comply with the applicable requirements in the NESHAP General Provisions, subpart A of 40 CFR part 63. 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 for affected sources with continuous monitoring systems. The General Provisions also require certain records and periodic reports. Records must be kept for at least 5 years with 2 years of that time being at the facility, and they may be kept in electronic form as long as they are readily available for review.

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

A. What Are the Air Impacts?

We estimate that nationwide organic HAP emissions will be reduced by approximately 1.080 megagrams/year (Mg/yr) (1,191 tpy) from existing sources. This represents a 45 percent reduction from the emissions baseline of 2,394 Mg/yr (2,639 tpy).

For new sources, we are assuming that most will use state-of-the-art coatings (predominantly powder coatings) even in the absence of the standards. These coatings will produce emission levels at or below the requirements of the final standards. Therefore, we are not attributing any emissions reductions from new sources to the final standards.

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

As at proposal, we have found that there are no significant expected non-air health, environmental, or energy impacts associated with the final standards. We reached this conclusion by considering the likely control approaches that will be used by existing and new sources. The use of low-HAP coating technologies will not produce any significant impacts on health, energy requirements, or the environment.

C. What Are the Cost and Economic Impacts?

The costs for facilities to comply with the final standards result from the switch to reformulated (lower-HAP) coatings, thinners, and cleaning materials. There will also be annual costs for meeting the monitoring, recordkeeping, and reporting (MRR) requirements of the rule.

For existing sources, the total nationwide annual cost in the 5th year of the standards is estimated to be $1.63 million. This includes approximately $0.48 million of direct costs associated with materials usage and $1.15 million for recordkeeping and reporting.

For new sources, only the costs of MRR apply. We estimate the annual cost in the 5th year for all new sources to be $341,000.

Our economic impact analysis showed the economic impacts of the promulgated standards to generally be minimal, with projected price increases and production decreases of less than 0.01 percent. Social costs are estimated at approximately $1.62 million in the 5th year for existing sources, with the burden being shared fairly equally between consumers and producers. No firms or facilities are expected to become at risk of closure due to the final standards. For more information, consult the ''Economic Impact Analysis of the Proposed NESHAP: Surface Coating of Large Appliances'' (Docket No. A–97–41).

V. What Are the Administrative Requirements?

A. Executive Order 12866, Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), EPA must determine whether the regulatory action is ''significant'' and therefore subject to the Office of Management and Budget (OMB) review and the requirements of

the Executive Order. The Executive Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

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

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

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

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

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

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

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

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the rule. These final standards are not subject to Executive Order 13045 because they do not establish an environmental standard based on an assessment of health or safety risks. No children's risk analysis was performed because no alternative technologies exist that would provide greater stringency at a reasonable cost. Furthermore, this rule has been determined not to be ''economically significant'' as defined under Executive Order 12866.

C. Executive Order 13132, Federalism

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

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

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

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 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.'' This final rule does not have tribal implications, as specified in Executive Order 13175. No tribal governments own or operate large appliance surface coating facilities. Thus, Executive Order 13175 does not apply to this rule.

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

This 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.

F. Unfunded Mandates Reform Act of 1995

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

The EPA has determined that this final rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. The maximum total annual cost of this rule for any year has been estimated to be slightly less than $2 million. Thus, today's final rule is not subject to the requirements of sections 202 and 205 of the UMRA. In addition, EPA has determined that these standards contain no regulatory requirements that might significantly or uniquely affect small governments because they contain no requirements that apply to such

governments or impose obligations upon them. Therefore, today's final rule is not subject to the requirements of section 203 of the UMRA.

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

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

For the purposes of assessing the impacts of today's final rule on small entities, small entity is defined as: (1) A small business ranging from 100–1,000 employees or less than $3.5 million in annual sales; (2) a small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

In accordance with the RFA and SBREFA, EPA conducted an assessment of these standards on small businesses within the large appliance coating industry. Based on Small Business Administration size definitions and reported sales and employment data, EPA's survey identified 221 facilities that apply surface coatings to large appliances. These facilities, which include major and area sources, are owned by 84 companies. Of these companies, 34 are small businesses. Although small businesses represent about 40 percent of the companies within the source category, they are expected to incur only 10 percent of the total industry compliance costs. Under the final standards, the average annual compliance cost share of sales for small businesses is only 0.20 percent, with 26 of the 34 small businesses not expected to incur any additional costs because they are area sources or are permitted as synthetic minor HAP emission sources. After reviewing the range of costs to be borne by small businesses, EPA has determined the costs are typically small and that this action will not have a significant impact on a substantial number of small entities.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA has nonetheless worked aggressively to minimize the impact of these standards on small entities, consistent with our obligations under the CAA. We solicited input from small entities during the data-gathering phase of the proposed rulemaking. We are including compliance options that give small entities flexibility in choosing the most cost-effective and least burdensome alternative for their operation. For example, a facility could purchase and use low-HAP coatings (i.e., pollution prevention) that meet the final standards instead of using add-on capture and control systems. This method of compliance can be demonstrated with minimum burden by using purchase and usage records. No testing of materials will typically be required as the facility owner will be allowed to show that their coatings meet the emission limits by providing formulation data supplied by the manufacturer.

H. Paperwork Reduction Act

The information collection requirements for these final standards will be 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. 1954.01) and a copy may be obtained from Susan Auby by mail at U.S. EPA, Office of Environmental Information, Collection Strategies Division (2822T), 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 off the internet at *http://www.epa.gov/icr.* The information requirements are not effective until OMB approves them.

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

The final standards require maintaining records of all coatings, thinners, and cleaning materials data and calculations used to determine compliance. This information includes the volume used during each monthly compliance period, mass fraction organic HAP, density, and, for coatings only, volume fraction of coating solids.

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

The MRR burden in the 5th year after the effective date of the promulgated rule is estimated to be 32,000 labor hours at a cost of $1.50 million for new and existing sources.

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

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's rules are listed in 40 CFR part 9 and 48 CFR chapter 15. The OMB control number(s) for the information collection requirements in this rule will be listed in an amendment to 40 CFR part 9 or 48 CFR chapter 15 in a subsequent **Federal Register**.

I. National Technology Transfer and Advancement Act

As noted in the proposed rule, section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104–113 (15 U.S.C. 272 note), directs the EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. The VCS are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by one or

more VCS bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable VCS.

This rulemaking involves technical standards. The EPA cites the following standards in this 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 placed in the docket (Docket No. A–97–41) for this rule.

The four VCS described below were identified as acceptable alternatives to EPA test methods for the purposes of this rule.

The VCS, ASME PTC 19–10–1981–Part 10, ''Flue and Exhaust Gas Analyses,'' 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 ASME PTC 19–10–1981–Part 10 is an acceptable alternative to Method 3B.

The VCS, ASTM 1475–98, ''Standard Test Method for Density of Liquid Coatings, Inks, and Related Products,'' is cited in this rule for determining the density of coatings and the volatile matter in coatings.

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 to determine the volume solids content of coatings. Currently, EPA Method 24 does not have a procedure for determining the volume of solids in coatings. These standards augment the procedures in Method 24, which currently states that volume solids content be calculated from the coating manufacturer's formulation.

Six VCS: ASTM D1475–90, ASTM D2369–95, ASTM D3792–91, ASTM D4017–96a, ASTM D4457–85 (Reapproved 91), and ASTM D5403–93 are already incorporated by reference (IBR) in EPA Method 24. Five VCS: ASTM D1979–91, ASTM D3432–89, ASTM D4747–87, ASTM D4827–93, and ASTM PS9–94 are IBR in EPA Method 311.

In addition to the VCS EPA uses in this rule, the search for emissions measurement procedures identified eleven other VCS. The EPA determined that nine of these eleven standards identified for measuring emissions of the HAP or surrogates subject to emission standards in this rule were impractical alternatives to EPA test methods for the purposes of this rule. Therefore, EPA does not intend to adopt these standards for this purpose. For further information on the determination of the eleven methods, see the docket for this rulemaking (Docket A–97–41).

Sections 63.4130, 63.4141, 63.4161, 63.4165, and 63.4166, and Table 1 of subpart NNNN list the EPA testing methods included in the final standards. Under § 63.7(f) of Subpart A of the General Provisions, a source may apply to EPA for permission to use alternative test methods 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 this 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**. This action is not a major rule as defined by 5 U.S.C. 804(2).

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: July 3, 2002.

Christine Todd Whitman,

Administrator.

For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is 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), (25), and (i) and adding a new paragraph (b)(26) 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) 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) and 63.5160(c).

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

* * * * *

(i) The following material is available for purchase from at least one of the following addresses: ASME International, Orders/Inquiries, P.O. Box 2300, Fairfield, NJ 07007–2300; or Global Engineering Documents, Sales Department, 15 Inverness Way East, Englewood, CO 80112: ANSI/ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses, IBR approved for §§ 63.3360(d)(1)(iii), 63.4166(a)(3), and 63.5160(d)(1)(iii).

* * * * *

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

Subpart NNNN—National Emission Standards for Hazardous Air Pollutants: Surface Coating of Large Appliances

Sec.

What This Subpart Covers

63.4080 What is the purpose of this subpart?
63.4081 Am I subject to this subpart?
63.4082 What parts of my plant does this subpart cover?
63.4083 When do I have to comply with this subpart?

Emission Limitations

63.4090 What emission limits must I meet?
63.4091 What are my options for meeting the emission limits?
63.4092 What operating limits must I meet?
63.4093 What work practice standards must I meet?

General Compliance Requirements

63.4100 What are my general requirements for complying with this subpart?
63.4101 What parts of the General Provisions apply to me?

Notifications, Reports, and Records

63.4110 What notifications must I submit?
63.4120 What reports must I submit?

63.4130 What records must I keep?
63.4131 In what form and for how long must I keep my records?

Compliance Requirements for the Compliant Material Option

63.4140 By what date must I conduct the initial compliance demonstration?
63.4141 How do I demonstrate initial compliance with the emission limitations?
63.4142 How do I demonstrate continuous compliance with the emission limitations?

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

63.4150 By what date must I conduct the initial compliance demonstration?
63.4151 How do I demonstrate initial compliance with the emission limitations?
63.4152 How do I demonstrate continuous compliance with the emission limitations?

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

63.4160 By what date must I conduct performance tests and other initial compliance demonstrations?
63.4161 How do I demonstrate initial compliance?
63.4162 [Reserved]
63.4163 How do I demonstrate continuous compliance with the emission limitations?
63.4164 What are the general requirements for performance tests?
63.4165 How do I determine the emission capture system efficiency?
63.4166 How do I determine the add-on control device emission destruction or removal efficiency?
63.4167 How do I establish the emission capture system and add-on control device operating limits during the performance test?
63.4168 What are the requirements for continuous parameter monitoring system installation, operation, and maintenance?

Other Requirements and Information

63.4180 Who implements and enforces this subpart?
63.4181 What definitions apply to this subpart?

Tables to Subpart NNNN of Part 63

Table 1 to Subpart NNNN of Part 63—Operating Limits if Using the Emission Rate with Add-on Controls Option
Table 2 to Subpart NNNN of Part 63—Applicability of General Provisions to Subpart NNNN
Table 3 to Subpart NNNN of Part 63—Default Organic HAP Mass Fraction for Solvents and Solvent Blends
Table 4 to Subpart NNNN of Part 63—Default Organic Mass Fraction for Petroleum Solvent Groups

Subpart NNNN—National Emission Standards for Hazardous Air Pollutants: Surface Coating of Large Appliances

What This Subpart Covers

§ 63.4080 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants for large appliance surface coating facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

§ 63.4081 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate a facility that applies coatings to large appliance parts or products, and is a major source, is located at a major source, or is part of a major source of emissions of hazardous air pollutants (HAP), except as provided in paragraph (d) of this section. A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year or any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year. You are not subject to this subpart if your large appliance surface coating facility is located at, or is part of, an area source of HAP emissions. An area source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that is not a major source.

(b) The large appliance surface coating source category includes any facility engaged in the surface coating of a large appliance part or product. Large appliance parts and products include but are not limited to cooking equipment; refrigerators, freezers, and refrigerated cabinets and cases; laundry equipment; dishwashers, trash compactors, and water heaters; and heating, ventilation, and air-conditioning (HVAC) units, air-conditioning (except motor vehicle) units, air-conditioning and heating combination units, comfort furnaces, and electric heat pumps. Specifically excluded are heat transfer coils and large commercial and industrial chillers.

(c) The large appliance surface coating activities and equipment to which this subpart applies are listed in paragraphs (c)(1) through (9) of this section:

(1) Surface preparation of large appliance parts and products;

(2) Preparation of a coating for application (e.g., mixing in thinners and other components);

(3) Application of a coating to large appliance parts and products using, for example, spray guns or dip tanks;

(4) Application of porcelain enamel, powder coating, and asphalt interior soundproofing coating;

(5) Flash-off, drying, or curing following the coating application operation;

(6) Cleaning of equipment used in coating operations (e.g., application equipment, hangers, racks);

(7) Storage of coatings, thinners, and cleaning materials;

(8) Conveying of coatings, thinners, and cleaning materials from storage areas to mixing areas or coating application areas, either manually (e.g., in buckets) or by automated means (e.g., transfer through pipes using pumps); and

(9) Handling and conveying of waste materials generated by coating operations.

(d) This subpart does not apply to surface coating that meets any of the criteria of paragraphs (d)(1) through (5) of this section.

(1) The surface coating of large appliance parts such as metal or plastic handles, hinges, or fasteners that have a wider use beyond large appliances is not subject to this subpart.

(2) The surface coating of large appliances conducted for the purpose of repairing or maintaining large appliances used by a facility and not for commerce is not subject to this subpart unless organic HAP emissions from the surface coating itself are as high as the rates specified in paragraph (a) of this section.

(3) The surface coating of heat transfer coils or large commercial and industrial chillers.

(4) The provisions of this subpart do not apply to research or laboratory facilities; janitorial, building, and facility maintenance operations; hobby shops operated for noncommercial purposes or coating applications using hand-held non-refillable aerosol containers.

(5) The provisions of this subpart do not apply to processes involving metal plating or phosphating of a substrate.

(e) If you own or operate an affected source that is subject to this subpart and at the same affected source you also perform surface coating subject to any other subparts in this part, you may choose for the affected source to comply with only one subpart. In order to choose this alternative, the total mass of organic HAP emissions from all surface coating operations in the affected source

must be less than or equal to the total mass of organic HAP emissions that would result if it complied separately with all applicable subparts. You must make this comparison for the initial compliance period and report it in the Notification of Compliance Status as required in § 63.4110(b)(10) and in the Notification of Compliance Status required by the other subparts. If you choose this alternative, your demonstration of compliance with the other subpart constitutes compliance with this subpart.

§ 63.4082 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 part of the large appliance surface coating facility:

(1) All coating operations as defined in § 63.4181;

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

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

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

(c) An affected source is a new affected source if you commenced its construction after July 23, 2002, and the construction is of a completely new large appliance surface coating facility where previously no large appliance surface coating facility had existed.

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

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

§ 63.4083 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 §§ 63.4140, 63.4150, and 63.4160.

(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 July 23, 2002, the compliance date is July 23, 2002.

(2) If the initial startup of your new or reconstructed affected source occurs after July 23, 2002, the compliance date is the date of initial startup of your affected source.

(b) For an existing affected source, the compliance date is July 25, 2005.

(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 the date the area source becomes a major source, or July 23, 2002, whichever is latest.

(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 July 25, 2005, whichever is later.

(d) You must meet the notification requirements in § 63.4110 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

§ 63.4090 What emission limits must I meet?

(a) For an existing affected source, you must limit organic HAP emissions to the atmosphere to no more than 0.13 kilogram per liter (kg/liter) (1.1 pound per gallon (lb/gal)) of coating solids used during each compliance period.

(b) For a new or reconstructed affected source, you must limit organic HAP emissions to the atmosphere to no more than 0.022 kg/liter (0.18 lb/gal) of coating solids used during each compliance period.

§ 63.4091 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 § 63.4090. 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 § 63.4130(c), and you must report it in the next semiannual compliance report required in § 63.4120.

(a) *Compliant material option.* Demonstrate that the organic HAP content of each coating used in the coating operation(s) is less than or equal to the applicable emission limit in § 63.4090, and that each thinner and each cleaning material used contains no organic HAP. You must meet all the requirements of §§ 63.4140, 63.4141, and 63.4142 to demonstrate compliance with the emission limit using this option.

(b) *Emission rate without add-on controls option.* Demonstrate that, based on data on the coatings, thinners, and cleaning materials used in the coating operation(s), the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit in § 63.4090. You must meet all the requirements of §§ 63.4150, 63.4151, and 63.4152 to demonstrate compliance with the emission limit using this option.

(c) *Emission rate with add-on controls option.* Demonstrate that, based on data on the coatings, thinners, and cleaning materials used in the coating operation(s) and the emission reductions achieved by emission capture and add-on controls, the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit in § 63.4090. 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 § 63.4092, except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4161(h), and that you meet the work practice standards required in § 63.4093. You must meet all the requirements of §§ 63.4160 through 63.4168 to demonstrate compliance with the emission limits, operating limits, and work practice standards using this option.

§ 63.4092 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 § 63.4161(h), you must meet the operating limits specified in Table 1 to this subpart. These operating limits apply to the emission capture and control systems on the coating operation(s) for which you use this option, and you must establish the operating limits during the performance test according to the requirements in § 63.4167. You must meet the operating limits at all times after you establish them.

(c) If you use an add-on control device other than those listed in Table 1 to this subpart or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the U.S. Environmental Protection Agency (EPA) Administrator for approval of alternative monitoring under § 63.8(f).

§ 63.4093 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) for which you use this option; or you must meet an alternative standard as provided in paragraph (c) of this section. The plan must specify practices and procedures to ensure that, at a minimum, the elements specified in paragraphs (b)(1) through (5) of this section are implemented.

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

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

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

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

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

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

General Compliance Requirements

§ 63.4100 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 § 63.4091(a) and (b), must be in compliance with the applicable emission limit in § 63.4090 at all times.

(2) Any coating operation(s) for which you use the emission rate with add-on controls option, as specified in § 63.4091(c), must be in compliance with the applicable emission limit in § 63.4090 and work practice standards in § 63.4093 at all times. Each controlled coating operation must be in compliance with the operating limits for emission capture systems and add-on control devices required by § 63.4092 at all times, except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4161(h).

(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 § 63.4083 and the date when the initial emission capture system and add-on control device performance tests have been completed as specified in § 63.4160. This requirement does not apply to a solvent recovery system for which you conduct a liquid-liquid material balance according to § 63.4161(h) in lieu of conducting performance tests.

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

§ 63.4101 What parts of the General Provisions apply to me?

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

Notifications, Reports, and Records

§ 63.4110 What notifications must I submit?

(a) You must submit the notifications in §§ 63.7(b) and (c), 63.8(f)(4), and 63.9(b) through (e) and (h) that apply to you by the dates specified in those sections, except as provided in paragraphs (a)(1) and (2) of this section.

(1) You must submit the Initial Notification required by § 63.9(b) for an existing affected source no later than July 23, 2003. For a new or reconstructed affected source, you must submit the Initial Notification no later than 120 days after initial startup or November 20, 2002, whichever is later.

(2) 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 § 63.4140, § 63.4150, or § 63.4160 that applies to your affected source.

(b) The Notification of Compliance Status must contain the information specified in paragraphs (b)(1) through (10) of this section and the applicable information specified 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 § 63.4140, § 63.4150, or § 63.4160 that applies to your affected source.

(4) Identification of the compliance option or options specified in § 63.4091 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 (b)(6)(i) and (ii) of this section.

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

(ii) If you failed to meet the applicable emission limit in § 63.4090, include all the calculations you used to determine the kg organic HAP emitted per liter of coating solids used. You do not need to submit information provided by the materials suppliers or manufacturers or test reports.

(7) For each of the data items listed in paragraphs (b)(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 § 63.4141(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 § 63.4151.

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

(i) For the compliant material option, provide an example determination of the organic HAP content for one coating, according to § 63.4141(d).

(ii) For the emission rate without add-on controls option, provide the calculation of the total mass of organic HAP emissions; the calculation of the total volume of coating solids used; and the calculation of the organic HAP emission rate, using Equations 1, 1A through 1C, 2, and 3, respectively, of § 63.4151.

(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, using Equations 1 and 1A through 1C of § 63.4151; the calculation of the total volume of coating solids used, using Equation 2 of § 63.4151; the calculation of the mass of organic HAP emission reduction by emission capture systems and add-on control devices, using Equations 1, 1A through 1C, 2, 3, and 3A through 3C of § 63.4161, as applicable; and the calculation of the organic HAP emission rate, using Equation 4 of § 63.4161.

(9) For the emission rate with add-on controls option, you must include the information specified in paragraphs (b)(9)(i) through (v) of this section, except that the requirements in paragraphs (b)(9)(i) through (iii) of this section do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4161(h).

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

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

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

(iv) A statement of whether or not you developed and implemented the work practice plan required by § 63.4093.

(v) A statement of whether or not you developed and implemented the startup, shutdown, and malfunction plan required by § 63.4100(d).

(10) If you have chosen for your affected source to comply with the requirements of another subpart in lieu of the requirements of this subpart, as allowed in § 63.4081(d), your Notification of Compliance Status must include a statement certifying your intent, as well as documentation and supporting materials showing that, during the initial compliance period, your affected source's total organic HAP emissions were equal to or less than the organic HAP emissions that would have resulted from complying separately with each applicable subpart.

§ 63.4120 What reports must I submit?

You must submit semiannual compliance reports for each affected source according to the requirements of this section. The semiannual compliance reporting requirements of this section may be satisfied by reports required under other parts of the Clean Air Act (CAA), as specified in paragraph (a)(5) of this section.

(a) 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) through (4) of this section.

(1) 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 § 63.4140, § 63.4150, or § 63.4160 that applies to your affected source and ends on June 30 or December 31, whichever date is the first date following the end of the initial compliance period.

(2) 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.

(3) 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.

(4) 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 semiannual compliance reports according to the dates the permitting authority has established instead of the date specified in paragraph (a)(3) of this section.

(5) 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.

(b) The semiannual compliance report must contain the information specified in paragraphs (b)(1) through (4) of this section and the information specified in paragraphs (c) through (j) of this section that is applicable to your affected source.

(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 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.

(4) Identification of the compliance option or options specified in § 63.4091 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.

(c) If there were no deviations from the emission limitations in §§ 63.4090, 63.4092, and 63.4093 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.

(d) If you use the compliant material option and there was a deviation from the applicable emission limit in § 63.4090, the semiannual compliance report must contain the information in paragraphs (d)(1) through (4) of this section.

(1) 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.

(2) The determination of the organic HAP content, according to § 63.4141(d), for each coating identified in paragraph (d)(1) of this section. You do not need to submit background data supporting this calculation, for example, information provided by coating suppliers or manufacturers or test reports.

(3) The determination of mass fraction of organic HAP for each thinner and cleaning material identified in paragraph (d)(1) of this section. You do not need to submit background data supporting this calculation, for example, information provided by material suppliers or manufacturers or test reports.

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

(e) If you use the emission rate without add-on controls option and there was a deviation from the applicable emission limit in § 63.4090, the semiannual compliance report must contain the information in paragraphs (e)(1) through (3) of this section.

(1) The beginning and ending dates of each compliance period during which the organic HAP emission rate exceeded the emission limit.

(2) The calculations used to determine the 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 § 63.4151; and, if applicable, the calculation used to determine the organic HAP in waste materials according to § 63.4151(e)(4). You do not need to submit background data supporting these calculations, for example, information provided by materials suppliers or manufacturers or test reports.

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

(f) If you use 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.

(g) If you use 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 (g)(1) through (14) of this section. This includes periods of startup, shutdown, and malfunction during which deviations occurred.

(1) The beginning and ending dates of each compliance period during which the organic HAP emission rate exceeded the applicable emission limit in § 63.4090.

(2) The calculations used to determine the organic HAP emission rate for each compliance period in which a deviation occurred. You must provide the calculation of the total mass of organic HAP emissions for the coatings, thinners, and cleaning materials used during the compliance period, using Equations 1, 1A through 1C, and 2 of § 63.4151 and, if applicable, the calculation used to determine the mass of organic HAP in waste materials according to § 63.4151(e)(4); the calculation of the total volume of coating solids used during the compliance period, using Equation 2 of § 63.4151; the calculation of the mass of organic HAP emission reduction during the compliance period by emission capture systems and add-on control devices, using Equations 1, 1A through 1C, 2, 3, and 3A through 3C of § 63.4161; and the calculation of the organic HAP emission rate, using Equation 4 of § 63.4161. You do not need to submit the background data supporting these calculations, for example, information provided by materials suppliers or manufacturers or test reports.

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

(4) A brief description of the CPMS.

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

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

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

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

(9) A summary of the total duration of each deviation from an operating limit in Table 1 to this subpart and 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.

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

(11) 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.

(12) A description of any changes in the CPMS, coating operation, emission capture system, or add-on control

device since the last semiannual reporting period.

(13) 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.

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

(h) 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).

(i) [Reserved]

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

(1) If your actions were consistent with your startup, shutdown, and malfunction plan (SSMP), you must include the information specified in § 63.10(d)(5) 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 startup, shutdown, and malfunction report as described in paragraphs (j)(2)(i) and (ii) of this section.

(i) You must describe the actions taken during the event in a report delivered by facsimile (fax), 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).

§ 63.4130 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, a record of the time periods (beginning and ending dates and times) and the coating operations at which each compliance option was used and a record of all determinations of kg organic HAP per liter of coating solids for the compliance option(s) you used, as specified in paragraphs (c)(1) through (3) of this section.

(1) For the compliant material option, a record of the determination of the organic HAP content for each coating, according to § 63.4141(d).

(2) 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 and 1A through 1C of § 63.4151 and, if applicable, the calculations used to determine the mass of organic HAP in waste materials according to § 63.4151(e)(4); the calculation of the total volume of coating solids used each month, using Equation 2 of § 63.4151; and the calculation of the organic HAP emission rate, using Equation 3 of § 63.4151.

(3) For the emission rate with 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 and 1A through 1C of § 63.4151 and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to § 63.4151(e)(4); the calculation of the total volume of coating solids used each month, using Equation 2 of § 63.4151; the calculation of the mass of organic HAP emission reduction by emission capture systems and add-on control devices, using Equations 1, 1A through 1C, 2, 3, and 3A through 3C of § 63.4161, as applicable; and the calculation of the organic HAP emission rate, using Equation 4 of § 63.4161.

(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 except for zero-HAP coatings for which volume solids determination is not required as allowed in § 63.4141(a).

(g) A record of the density for each coating used during each compliance period except for zero-HAP coatings for which volume solids determination is not required as allowed in § 63.4141(a) and, if you use either the emission rate without add-on controls or the emission rate with add-on controls compliance option, a record of the density for each thinner and cleaning material used during each compliance period.

(h) If you use an allowance in Equation 1 of § 63.4151 for organic HAP contained in waste materials sent to or designated for shipment to a treatment, storage, and disposal facility (TSDF) according to § 63.4151(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 § 63.4151, 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 § 63.4151.

(3) The methodology used in accordance with § 63.4151(e)(4) to determine the total amount of waste materials sent to or the amount collected, stored, and designated for transport to a TSDF each month; and the methodology to determine the mass of organic HAP contained in these waste materials. This must include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment.

(i) [Reserved]

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

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

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

period of startup, shutdown, or malfunction.

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

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

(4) For each capture system that is a PTE, the data and documentation you used to support a determination that the capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and has a capture efficiency of 100 percent, as specified in § 63.4165(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 §§ 63.4164 and 63.4165(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 § 63.4165(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 § 63.4166.

(i) Records of each add-on control device performance test conducted according to §§ 63.4164 and 63.4166.

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

(8) Records of the data and calculations you used to establish the emission capture and add-on control device operating limits as specified in § 63.4167 and to document compliance with the operating limits as specified in Table 1 of this subpart.

(9) A record of the work practice plan required by § 63.4093, and documentation that you are implementing the plan on a continuous basis.

§ 63.4131 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 data base.

(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

§ 63.4140 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 § 63.4141. The initial compliance period begins on the applicable compliance date specified in § 63.4083 and ends on the last day of the first full month after 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 month. The initial compliance demonstration includes the determination according to § 63.4141 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 § 63.4090, and that you used no thinners or cleaning materials that contained organic HAP.

§ 63.4141 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(s) 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 § 63.4090 and must use no thinner or cleaning material that contains organic HAP, as determined according to this section during the initial compliance period. Any coating operation(s) for which you use the compliant material option is not required to meet the operating limits or work practice standards required in §§ 63.4092 and 63.4093, 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(s) using this option. Use the procedures in this section on each coating, thinner, and cleaning material in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration. You do not need to redetermine the HAP content of 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.

(i) Count each organic HAP that is measured to be present at 0.1 percent by mass or more for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other 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 (for example, 0.3791).

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

(2) *Method 24 (appendix A to 40 CFR part 60).* For coatings, you may use Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP.

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

(4) *Information from the supplier or manufacturer of the material.* You may rely on information other than that generated by the test methods specified in paragraphs (a)(1) through (3) of this section, such as manufacturer's formulation data if they represent 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.

(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 mass fraction of organic HAP in these solvent blends listed in Table 3 or 4 of this subpart. If you use the tables, you must use the values in Table 3 for all solvent blends that match Table 3 entries, and you may only use Table 4 if the solvent blends in the materials you use do not match any of the solvent blends in Table 3, and you only know whether the blend is aliphatic or aromatic. However, if the results of a Method 311 test indicate higher values than those listed on Table 3 or 4 of this subpart, the Method 311 results will take precedence.

(b) *Determine the volume fraction of coating solids for each coating.* You must determine the volume fraction of coating solids (liters of coating solids per liter of coating) for each coating used during the compliance period by a test, by information provided by the supplier or the manufacturer of the material, or by calculation as specified in paragraphs (b)(1) through (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,'' 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.

(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:

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

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 D1475–98, ''Standard Test Method for Density of Liquid Coatings, Inks, and Related Products'' (incorporated by reference, see § 63.14) information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475–98 test results and other information sources, the test results will take precedence.

(c) *Determine the density of each coating.* Determine the density of each coating used during the compliance period from test results using ASTM Method D1475–98, ''Standard Test Method for Density of Liquid Coatings, Inks, and Related Products'' (incorporated by reference, see § 63.14), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475–98 test results and other information sources, the test results will take precedence.

(d) Determine the organic HAP content of each coating. Determine the organic HAP content, kg organic HAP per liter coating solids, of each coating used during the compliance period, using Equation 2 of this section, except that if the mass fraction of organic HAP equals zero, then the organic HAP content also equals zero and you are not required to use Equation 2 to calculate the organic HAP content:

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

Where:

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

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

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

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

(e) The organic HAP content for each coating used during the initial compliance period must be less than or equal to the applicable emission limit in § 63.4090; 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 §§ 63.4130 and 63.4131. As part of the Notification of Compliance Status required in § 63.4110, 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 exceeds the applicable emission limit in § 63.4090, and you used no thinners or cleaning materials that contain organic HAP, determined according to paragraph (a) of this section.

§ 63.4142 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 according to § 63.4141(d), exceeds the applicable emission limit in § 63.4090, and use no thinner or cleaning material that contains organic HAP, determined according to § 63.4141(a). Each month following the initial compliance period described in § 63.4140 is a compliance period.

(b) If you choose to comply with the emission limitations by using the compliant material option, the use of any coating, thinner, or cleaning material that does not meet the criteria specified in paragraph (a) of this section is a deviation from the emission limitations that must be reported as specified in §§ 63.4110(b)(6) and 63.4120(d).

(c) As part of each semiannual compliance report required by § 63.4120, you must submit a statement that you were in compliance with the emission limitations during the reporting period because you used no thinners or cleaning materials that contained organic HAP, and you used no coatings for which the organic HAP content exceeded the applicable emission limit in § 63.4090.

(d) You must maintain records as specified in §§ 63.4130 and 63.4131.

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

§ 63.4150 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 § 63.4151. The initial compliance period begins on the applicable compliance date specified in § 63.4083 and ends on the last day of the first full month after 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 month. The initial compliance demonstration includes the calculations according to § 63.4151 and supporting documentation showing that the organic HAP emission rate for the initial compliance period was equal to or less than the applicable emission limit in § 63.4090.

§ 63.4151 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 of 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(s) 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(s) must meet the applicable emission limit in § 63.4090 but not the operating limits or work practice standards in §§ 63.4092 and 63.4093, respectively, during the initial compliance period. You must meet all of the requirements of this section to demonstrate initial compliance with the applicable emission limit in § 63.4090 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 the compliance period according to the requirements in § 63.4141(a).

(b) *Determine the volume fraction of coating solids for each coating.* Determine the volume fraction of coating solids for each coating used during the compliance period according to the requirements in § 63.4141(b).

(c) *Determine the density of each material.* Determine the density of each coating, thinner, and cleaning material used during the compliance period according to the requirements in § 63.4141(c).

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

(e) *Calculate the mass of organic HAP emissions during the compliance period.* The mass of organic HAP emissions is the combined mass of organic HAP contained in all coatings, thinners, and cleaning materials used during the compliance period minus the organic HAP in certain waste materials. Calculate 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 compliance period, kg.

A = total mass of organic HAP in the coatings used during the compliance period, kg, as calculated in Equation 1A of this section.

B = total mass of organic HAP in the thinners used during the compliance period, kg, as calculated in Equation 1B of this section.

C = total mass of organic HAP in the cleaning materials used during the compliance period, kg, as calculated in Equation 1C of this section.

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

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

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

Where:

A = total mass of organic HAP in the coatings used during the compliance period, kg.

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

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

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

m = number of different coatings used during the compliance period.

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

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

Where:

B = total mass or organic HAP in the thinners used during the compliance period, kg.

$Vol_{t,j}$ = total volume of thinner, j, used during the compliance period, liters.

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

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

n = number of different thinners used during the compliance period.

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

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

Where:

C = total mass of organic HAP in the cleaning materials used during the compliance period, kg.

$Vol_{s,k}$ = total volume of cleaning material, k, used during the compliance period, liters.

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

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

p = number of different cleaning materials used during the compliance period.

(4) Determine the mass of organic HAP contained in waste materials sent to a TSDF. 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 the calculation of the mass of organic HAP emissions (Equation 1 of this section), then you must determine it according to paragraphs (e)(4)(i) through (v) of this section.

(i) You may include in the determination of organic HAP in waste materials only the 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 that is regulated as a TSDF under 40 CFR part 262, 264, 265, or 266. The TSDF may be either off-site or on-site. You may not include in the determination the organic HAP contained in wastewater.

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

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

(iv) You must document your methodology to determine the amount of waste materials and the total mass of organic HAP they contain, as required in § 63.4130(h).

(v) 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 during the compliance period.* Determine the total volume of coating solids used, liters, which is the combined volume of coating solids for all of the coatings used during the compliance period, using Equation 2 of this section.

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

Where:

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

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

$V_{s,i}$ = volume fraction of coating solids for coating, i, liters solids per liter coating, determined according to § 63.4141(b).

m = number of coatings used during the compliance period.

(g) Calculate the organic HAP emission rate, kg organic HAP per liter coating solids used, using Equation 3 of this section:

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

Where:

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

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

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

(h) The organic HAP emission rate for the initial compliance period must be less than or equal to the applicable emission limit in § 63.4090. You must keep all records as required by §§ 63.4130 and 63.4131. As part of the Notification of Compliance Status required by § 63.4110, 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 § 63.4090.

§ 63.4152 How do I demonstrate continuous compliance with the emission limitations?

(a) To demonstrate continuous compliance, the organic HAP emission rate for each compliance period, determined according to § 63.4151(a) through (g), must be less than or equal to the applicable emission limit in § 63.4090. Each month following the initial compliance period described in § 63.4150 is a compliance period.

(b) If the organic HAP emission rate for any compliance period exceeded the applicable emission limit in § 63.4090, this is a deviation from the emission limitations for that compliance period and must be reported as specified in §§ 63.4110(b)(6) and 63.4120(e).

(c) As part of each semiannual compliance report required by § 63.4120, you must 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 § 63.4090.

(d) You must maintain records as specified in §§ 63.4130 and 63.4131.

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

§ 63.4160 By what date must I conduct performance tests and other initial compliance demonstrations?

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

(1) All emission capture systems, add-on control devices, and CPMS you use to demonstrate compliance must be installed and operating no later than the applicable compliance date specified in § 63.4183. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4161(h), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§ 63.4164, 63.4165, and 63.4166, and establish the operating limits required by § 63.4092 no later than the compliance date specified in § 63.4083. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.4161(h), you must initiate the first material balance no later than the compliance date specified in § 63.4083.

(2) You must develop and begin implementing the work practice plan required by § 63.4093 no later than the compliance date specified in § 63.4083.

(3) You must complete the compliance demonstration for the initial compliance period according to the requirements of § 63.4161. The initial compliance period begins on the applicable compliance date specified in § 63.4083 and ends on the last day of the first full month after 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 month. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.4164, 63.4165, and 63.4166; results of liquid-liquid material balances conducted according to § 63.4161(h); calculations according to § 63.4161 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 § 63.4090(a); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.4168; and documentation of whether you developed and implemented the work practice plan required by § 63.4093.

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

(1) All emission capture systems, add-on control devices, and CPMS you use to demonstrate compliance must be installed and operating no later than the applicable compliance date specified in § 63.4183. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4161(h), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§ 63.4164, 63.4165, and 63.4166, and establish the operating limits required by § 63.4092 no later than 180 days after the applicable compliance date specified in § 63.4183. For a solvent recovery system for which you conduct liquid-liquid material balances according to § 63.4161(h), you must initiate the first material balance no later than 180 days after the applicable compliance date specified in § 63.4183.

(2) You must develop and begin implementing the work practice plan required by § 63.4093 no later than the compliance date specified in § 63.4083.

(3) You must complete the compliance demonstration for the initial compliance period according to the requirements of § 63.4161. The initial compliance period begins on the applicable compliance date specified in § 63.4083 and ends on the last day of the first full month after the compliance date, or the date you conduct the performance tests of the emission capture systems and add-on control devices, or initiate the first liquid-liquid material balance for a solvent recovery system; whichever is later. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.4164, 63.4165, and 63.4166; results of liquid-liquid material balances conducted according to § 63.4161(h); calculations according to § 63.4161 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 § 63.4090(b); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.4168; and documentation of whether you developed and implemented the work practice plan required by § 63.4093.

(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by § 63.4092 until after you have completed the performance tests specified in paragraph (b)(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 (b)(1) of this section. This requirement does not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to § 63.4161(h).

§ 63.4161 How do I demonstrate initial compliance?

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(s) in the affected source for which you do not use this option. To demonstrate initial compliance, the coating operation(s) for which you use the emission rate with add-on controls option must meet the applicable emission limit in § 63.4090 and the work practice standards required in § 63.4093; and each controlled coating operation must meet the operating limits required in § 63.4092. 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 onsite and reused in the coating operation(s) for which you use the emission rate with add-on controls option.

(a) Except as provided in § 63.4160(b)(4) and except for solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements of § 63.4161(h), you must establish and demonstrate continuous compliance

during the initial compliance period with the operating limits required by § 63.4092, using the procedures specified in §§ 63.4167 and 63.4168.

(b) You must develop, implement, and document your implementation of the work practice plan required by § 63.4093 during the initial compliance period as specified in § 63.4130.

(c) You must follow the procedures in paragraphs (d) through (l) of this section to demonstrate compliance with the applicable emission limit in § 63.4090.

(d) *Determine the mass fraction of organic HAP, density, volume used, and volume fraction of coating solids.* Follow the procedures specified in § 63.4151(a) through (d) to determine the mass fraction of organic HAP, density, and volume of each coating, thinner, and cleaning material used during the compliance period, and the volume fraction of coating solids for each coating used during the compliance period.

(e) *Calculate the total mass of organic HAP emissions before add-on controls.* Using Equation 1 of § 63.4151, calculate the total mass of organic HAP emissions before add-on controls from all coatings, thinners, and cleaning materials used during the compliance period in the coating operation or group of coating operations for which you use the emission rate with add-on controls option.

(f) *Calculate the organic HAP emission reduction for each controlled coating operation.* Determine the mass of organic HAP emissions reduced for each controlled coating operation during the compliance period. The emissions 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 (g) of this section to calculate the mass of organic HAP emissions 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 (h) of this section to calculate the organic HAP emissions reduction.

(g) *Calculate the organic HAP emissions reduction for controlled coating operations not using liquid-liquid material balance.* For each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances, calculate organic HAP emissions reduction, using Equation 1 of this section, by applying the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coatings, thinners, and cleaning materials that are used in the coating operation served by the emission capture system and add-on control device during the compliance period. For any period of time a deviation specified in § 63.4163(c) or (d) occurs in the controlled coating operation, including a deviation during a period of startup, shutdown, or malfunction, you must assume zero efficiency for the emission capture system and add-on control device. For the purposes of completing the compliance calculations, 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. You must not include those materials in the calculations of organic HAP emissions reduction in Equation 1 of this section.

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

Where:

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

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

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

C_I = total mass of organic HAP in the cleaning materials used in the controlled coating operation during the compliance period, kg, as calculated in Equation 1C of this section.

CE = capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in §§ 63.4164 and 63.4165 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 §§ 63.4164 and 63.4166 to measure and record the organic HAP destruction or removal efficiency.

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

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

Where:

A_I = mass of organic HAP in the coatings used in the controlled coating operation, kg.

$Vol_{c,i}$ = total volume of coating, i, used, liters.

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

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

m = number of different coatings used.

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

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

Where:

B_I = mass of organic HAP in the thinners used in the controlled coating operation, kg.

$Vol_{t,j}$ = total volume of thinner, j, used, liters.

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

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

n = number of different thinners used.

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

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

Where:

C_I = mass of organic HAP in the cleaning materials used in the controlled coating operation, kg.

$Vol_{s,k}$ = total volume of cleaning material, k, used, liters.

$D_{s,k}$ = density of cleaning material, k, kg per liter.
$W_{s,k}$ = mass fraction of organic HAP in cleaning material, k, kg per kg.
p = number of different cleaning materials used.

(h) *Calculate the organic HAP emissions reduction for controlled coating operations using liquid-liquid material balance.* For each controlled coating operation using a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emissions 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 the compliance period. Perform a liquid-liquid material balance for each compliance period as specified in paragraphs (h)(1) through (6) of this section. Calculate the mass of organic HAP emission reduction by the solvent recovery system as specified in paragraph (h)(7) of this section.

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

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

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

(4) Determine the density of each coating, thinner, and cleaning material used in the coating operation controlled by the solvent recovery system during the compliance period, kg per liter, according to § 63.4151(c).

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

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

$$R_v = 100 \frac{M_{VR}}{\sum_{i=1}^{m} Vol_i D_i C_{Vi} + \sum_{j=1}^{n} Vol_j D_j + \sum_{k=1}^{p} Vol_k D_k} \quad \text{(Eq. 2)}$$

Where:
R_V = volatile organic matter collection and recovery efficiency of the solvent recovery system during the compliance period, percent.
M_{VR} = mass of volatile organic matter recovered by the solvent recovery system during the compliance period, kg.
Vol_i = volume of coating, i, used in the coating operation controlled by the solvent recovery system during the compliance period, liters.
D_i = density of coating, i, kg coating per liter coating.
C_{Vi} = mass fraction of volatile organic matter for coating, i, kg volatile organic matter per kg coating.
Vol_j = volume of thinner, j, used in the coating operation controlled by the solvent recovery system during the compliance period, liters.
D_j = density of thinner, j, kg thinner per liter thinner.
Vol_k = volume of cleaning material, k, used in the coating operation controlled by the solvent recovery system during the compliance period, liters.
D_k = density of cleaning material, k, kg cleaning material per liter cleaning material
m = number of different coatings used in the coating operation controlled by the solvent recovery system during the compliance period.
n = number of different thinners used in the coating operation controlled by the solvent recovery system during the compliance period.
p = number of different cleaning materials used in the coating operation controlled by the solvent recovery system during the compliance period.

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

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

Where:
H_{CSR} = mass of organic HAP emissions reduction for the coating operation controlled by the solvent recovery system using a liquid-liquid material balance during the compliance period, kg.
A_I = total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 1A of this section.
B_I = total mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 1B of this section.
C_I = total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 1C of this section.
R_V = volatile organic matter collection and recovery efficiency of the solvent recovery system, percent, from Equation 2 of this section.

(i) [Reserved]

(j) *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 the compliance period, using Equation 2 of § 63.4151.

(k) *Calculate the organic HAP emission rate.* Determine the organic HAP emission rate to the atmosphere, kg organic HAP per liter coating solids used during the compliance period, using Equation 4 of this section.

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

Where:

H_{HAP} = organic HAP emission rate to the atmosphere during the compliance period, kg organic HAP per liter coating solids used.

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

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

$H_{CSR,j}$ = total mass of organic HAP emissions reduction for controlled coating operation, j, during the compliance period, kg, from Equation 3 of this section.

V_{st} = total volume of coating solids used during the compliance period, liters, from Equation 2 of § 63.4151.

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

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

(l) To demonstrate initial compliance with the emission limit, calculated using Equation 4 of this section, must be less than or equal to the applicable emission limit in § 63.4090. You must keep all records as required by §§ 63.4130 and 63.4131. As part of the Notification of Compliance Status required by § 63.4110, 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 § 63.4090, and you achieved the operating limits required by § 63.4092 and the work practice standards required by § 63.4093.

§ 63.4162 [Reserved]

§ 63.4163 How do I demonstrate continuous compliance with the emission limitations?

(a) To demonstrate continuous compliance with the applicable emission limit in § 63.4090, the organic HAP emission rate for each compliance period determined according to the procedures in § 63.4161 must be equal to or less than the applicable emission limit in § 63.4090. Each month following the initial compliance period described in § 63.4160 is a compliance period.

(b) If the organic HAP emission rate for any compliance period exceeded the applicable emission limit in § 63.4090, this is a deviation from the emission limitation for that compliance period and must be reported as specified in §§ 63.4110(b)(6) and 63.4120(g).

(c) You must demonstrate continuous compliance with each operating limit required by § 63.4092 that applies to you as specified in Table 1 to this subpart.

(1) If an operating parameter is out of the allowed range specified in Table 1 to this subpart, this is a deviation from the operating limit that must be reported as specified in §§ 63.4110(b)(6) and 63.4120(g).

(2) If an operating parameter deviates from the operating limit specified in Table 1 to this subpart, then you must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation. For the purposes of completing the compliance calculations specified in § 63.4161, 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. You must not include those materials in the calculation of organic HAP emissions reductions in Equation 1 of § 63.4161.

(d) You must meet the requirements for bypass lines in § 63.4168(b). If any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running, this is a deviation that must be reported as specified in §§ 63.4110(b)(6) and 63.4120(g). For the purposes of completing the compliance calculations specified in § 63.4161, 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. You must not include those materials in the calculation of organic HAP emissions reductions in Equation 1 of § 63.4161.

(e) You must demonstrate continuous compliance with the work practice standards in § 63.4093. 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 § 63.4130(k)(9), this is a deviation from the work practice standards that must be reported as specified in §§ 63.4110(b)(6) and 63.4120(g).

(f) As part of each semiannual compliance report required in § 63.4120, you must 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 § 63.4090, and you achieved the operating limits required by § 63.4092 and the work practice standards required by § 63.4093 during each compliance period.

(g) During periods of startup, shutdown, and malfunction of the emission capture system, add-on control device, or coating operation that may affect emission capture or control device efficiency, you must operate in accordance with the SSMP required by § 63.4100(d).

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

(i) [Reserved]

(j) You must maintain records as specified in §§ 63.4130 and 63.4131.

§§ 63.4130 and 63.4131.

§ 63.4164 What are the general requirements for performance tests?

(a) You must conduct each performance test required by § 63.4160 according to the requirements in § 63.7(e)(1) and under the conditions in this section unless you obtain a waiver of the performance test according to the provisions in § 63.7(h).

(1) *Representative coating operation operating conditions.* You must conduct the performance test under

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

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

(b) You must conduct each performance test of an emission capture system according to the requirements in § 63.4165 and of an add-on control device according to the requirements in § 63.4166.

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

§ 63.4165 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 § 63.4160.

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

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

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

(2) Use Method 204A or 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 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.

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

Where:

TVH_{used} = total mass of TVH liquid input from all coatings, thinners, and cleaning materials used in the coating operation during the capture efficiency test run, kg.

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

Vol_i = total volume of coating, thinner, or cleaning material, i, used in the coating operation during the capture efficiency test run, liters.

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

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

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

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

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

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

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

Where:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Where:

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

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

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

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

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

§ 63.4166 How do I determine the add-on control device emission destruction or removal efficiency?

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

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

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

(3) Use Method 3, 3A, or 3B of appendix A to 40 CFR part 60, as appropriate, for gas analysis to determine dry molecular weight. You may also use as an alternative to Method 3B, the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas in ANSI/ASME, PTC 19.10–1981, ''Flue

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

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

(3) Use Method 25A if the add-on control device is not an oxidizer.

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

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

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

Where:

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

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

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

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

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

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

Where:

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

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

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

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

§ 63.4167 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 § 63.4160 and described in §§ 63.4164, 63.4165, and 63.4166, you must establish the operating limits required by § 63.4092 according to this section unless you have received approval for alternative monitoring and operating limits under § 63.8(f) as specified in § 63.4092.

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

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

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

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

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

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

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

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

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

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

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

destruction efficiency according to § 63.4166.

(c) *Carbon adsorbers.* If your add-on control device is a carbon absorber, 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 absorber 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 § 63.4165(a), establish an operating limit for either the gas volumetric flow rate or duct static pressure as specified in paragraphs (f)(1) and (2) of this section. The operating limit for a PTE is specified in Table 1 to this subpart.

(1) During the capture efficiency determination required by § 63.4160 and described in §§ 63.4164 and 63.4165, 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.

§ 63.4168 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 except as specified in paragraph (a)(6) of this section.

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

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

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

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

(7) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Except for periods of required quality assurance or control activities, any period during which the CPMS fails to operate and record data continuously as required by paragraph (a)(1) of this section, or generates data that cannot be included in calculating averages as specified in paragraph (a)(6) of this section, is a deviation from the monitoring requirements.

(b) *Capture system bypass line.* You must comply with the requirements of paragraphs (a)(3) through (5) and (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 shutdown the coating operation.

(2) If any bypass line is opened, you must include a description of why the bypass line was opened and the length of time it remained open in the semiannual compliance reports required in § 63.4120.

(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 (a) and (c)(1) through (3) of this section:

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

(2) For a catalytic oxidizer, install a gas temperature monitor in the gas stream immediately before the catalyst bed, and if you establish operating limits according to § 63.6167(b)(1) and (2), also install a gas temperature monitor in the gas stream immediately after the catalyst bed.

(3) For each gas temperature monitoring device, you must comply with the requirements in paragraphs (c)(3)(i) through (vii) of this section.

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

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

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

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

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

(vi) Any time the sensor exceeds the manufacturer's specified maximum operating temperature range, either conduct calibration and validation checks 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 (a) and (f)(1) and (2) of this section.

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

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

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

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

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

(iv) Check the pressure tap daily.

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

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

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

(g) *Emission capture systems.* The capture system monitoring system must comply with the requirements in paragraph (a) of this section and 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

§ 63.4180 Who implements and enforces this subpart?

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

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the 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 in § 63.4093 under § 63.6(g).

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

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

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

§ 63.4181 What definitions apply to this subpart?

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

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

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

Capture device means a hood, enclosure, room, floor sweep, or other means of containing or collecting emissions and directing those emissions into an add-on 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 and cleaning materials, both at the point of application and at subsequent points where emissions from the coatings and cleaning materials occur, such as flashoff, drying, or curing. As used in this subpart, multiple capture devices that collect emissions generated by a coating operation are considered a single capture system.

Cleaning material means a solvent used to remove contaminants and other materials such as dirt, grease, oil, and dried or wet coating (e.g., depainting) 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 cleaning materials used for substrates or equipment or both.

Coating means a material applied to a substrate for decorative, protective, or functional purposes. For the purposes of this subpart, coatings include paints, porcelain enamels, sealants, caulks, inks, adhesives, and maskants. Decorative, protective, or functional materials that consist only of protective oils, 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. Applications of coatings using hand-held, nonrefillable aerosol containers, touchup markers, or marking pens are not coating operations 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 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, capture system, or add-on control device parameters.

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

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

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

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

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

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

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

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

Facility maintenance means the routine repair or refurbishing (including surface coating) of the tools, equipment, machinery, and structures that comprise the infrastructure of the facility or that are necessary for the facility to function in its intended capacity. It does not mean cleaning of equipment that is part of a large appliances coating operation.

Heat transfer coil means a tube-and-fin assembly used in large appliance

products to remove heat from a circulating fluid.

Large appliance part means a component of a large appliance product except for the wider use parts excluded under § 63.4081(d)(1).

Large appliance product means, but is not limited to, any of the following products (except as provided under § 63.4081(d)(3)) manufactured for household, recreational, institutional, commercial, or industrial use:

(1) Cooking equipment (ovens, ranges, and microwave ovens but not including toasters, counter-top grills, and similar small products);

(2) Refrigerators, freezers, and refrigerated cabinets and cases;

(3) Laundry equipment (washers, dryers, drycleaning machines, and pressing machines);

(4) Dishwashers, trash compactors, and water heaters; and

(5) HVAC units, air-conditioning (except motor vehicle) units, air-conditioning and heating combination units, comfort furnaces, and electric heat pumps.

Specifically excluded are heat transfer coils and large commercial and industrial chillers.

Large commercial and industrial chillers means, for the purposes of this subpart, equipment designed to produce chilled water for use in commercial or industrial HVAC systems.

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 § 63.4141. Manufacturer's formulation data may include, but are not limited to, information on density, organic HAP content, volatile organic matter content, and coating solids content.

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

Month means a calendar month or a pre-specified period of 28 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 § 63.4141. 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 a substrate for the purpose of providing lubrication or protection from corrosion without forming a solid film. This definition of protective oils 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 conducted under the close supervision of technically trained personnel and is not engaged in the manufacture of final or intermediate products for commercial purposes, except in a de minimis manner.

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

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

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

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

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

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

Uncontrolled coating operation means a coating operation from which no 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, expressed as liters of coating solids per liter of coating.

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

Tables to Subpart NNNN of Part 63

TABLE 1 TO SUBPART NNNN 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 § 63.4092, you must comply with the applicable operating limits in the following table]

For 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 § 63.4167(a).	i. collecting the combustion temperature data according to § 63.4168(c); ii. reducing the data to 3-hour block averages; and iii. maintaining the 3-hour average combustion temperature at or above the combustion temperature limit.
2. catalytic oxidizer	a. the average temperature measured just before the catalyst bed in any 3-hour period must not fall below the limit established according to § 63.4167(b); and either.	i. collecting the temperature data according to § 63.4168(c); ii. reducing the data to 3-hour block before the averages; and iii. maintaining the 3-hour average temperature before the catalyst bed at or above the temperature limit.

TABLE 1 TO SUBPART NNNN 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 § 63.4092, you must comply with the applicable operating limits in the following table]

For following device . . .	You must meet the following operating limit . . .	And you must demonstrate continuous compliance with the operating limit by . . .
	b. ensure that average temperature difference across the catalyst bed in any 3-hour period does not fall below the temperature difference limit established according to § 63.4167(b)(2); or.	i. collecting the temperature data according to § 63.4168(c); ii. reducing the data to 3-hour block difference across averages; and iii. maintaining the 3-hour average temperature difference at or above the temperature difference limit.
	c. develop and implement an inspection and maintenance plan according to § 63.4167(b)(4).	i. maintaining an up-to-date inspection and maintenance plan, records of annual catalyst activity checks, records monthly inspections of the oxidizer system, and records of the annual internal inspections of the catalyst bed. If a problem is discovered during a monthly or annual inspection required by § 63.4167(b)(4), you must take corrective action as soon as practicable consistent with the manufacturer's recommendations.
3. carbon adsorber	a. the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each carbon bed regeneration cycle must not fall below the total regeneration desorbing gas mass flow limit established according to § 63.4167(c).	i. measuring the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle according to § 63.4168(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 § 63.4167(c).	i. measuring the temperature of the carbon bed after completing each regeneration and any cooling cycle according to § 63.4168(d); and ii. operating the carbon beds such that each carbon bed is not returned to service 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 § 63.4167(d).	i. collecting the condenser outlet (product side) gas temperature according to § 63.4168(e); ii. reducing the data to 3-hour block averages; and iii. maintaining the 3-hour average gas exceed the temperature at the outlet at or below the temperature limit.
5. concentrators, including zeolite wheels and rotary carbon adsorbers.	a. the average gas temperature of the desorption concentrate stream in any 3-hour period must not fall below the limit established according to § 63.4167(e).	i. collecting the temperature data according to 63.4168(f); ii. reducing the data to 3-hour block averaged; and iii. maintaining the 3-hour average temperature at or above the temperature limit.
	b. the average pressure drop of the dilute stream across the concentrator in any 3-hour period must not fall below the limit established according to § 63.4167(e).	i. collecting the pressure drop data according to 63.4168(f); and ii. reducing the pressure drop data to across the 3-hour block averages; and iii. maintaining the 3-hour average pressure drop at or above the pressure drop limit.
6. emission capture system that is a PTE according to § 63.4165(a).	a. the direction of the air flow at all times must be into the enclosure; and either.	i. collecting the direction of air flow, and either the facial velocity of air through all natural draft openings according to § 63.4168(g)(1) or the pressure drop across the enclosure according to § 63.4168(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.	See item 6.a. of this table.
	c. the pressure drop across the enclosure must be at least 0.007 inch H2O, as established in Method 204 of appendix M to 40 CFR part 51.	See item 6.a. of this table.

TABLE 1 TO SUBPART NNNN 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 § 63.4092, you must comply with the applicable operating limits in the following table]

For following device . . .	You must meet the following operating limit . . .	And you must demonstrate continuous compliance with the operating limit by . . .
7. emission capture system that is not a PTE according to § 63.4165(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 § 63.4167(f).	i. collecting the gas volumetric flow rate or duct static pressure for each capture device according to § 63.4168(g); ii. reducing the data to 3-hour block averages; and iii. maintaining the 3-hour average gas volumetric flow rate or duct static pressure for each capture device at or above the gas volumetric flow rate or duct static pressure limit.

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

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

Citation	Subject	Applicable to subpart NNNN	Explanation
§ 63.1(a)(1)–(14)	General Applicability	Yes	
§ 63.1(b)(1)–(3)	Initial Applicability Determination	Yes	Applicability to subpart NNNN is also specified in § 63.4081.
§ 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 NNNN.
§ 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 § 63.4181.
§ 63.3(a)–(c)	Units and Abbreviations	Yes	
§ 63.4(a)(1)–(5)	Prohibited Activities	Yes	
§ 63.4(b)–(c)	Circumvention/Severability	Yes	
§ 63.5(a)	Construction/Reconstruction	Yes	
§ 63.5(b)(1)–(6)	Requirements for Existing, Newly Constructed, and Reconstructed Sources.	Yes	
§ 63.5(d)	Application for Approval of Construction/Reconstruction.	Yes	
§ 63.5(e)	Approval of Construction/Reconstruction	Yes	
§ 63.5(f)	Approval of Construction/Reconstruction Based on Prior State Review.	Yes	
§ 63.6(a)	Compliance With Standards and Maintenance Requirements—Applicability.	Yes	
§ 63.6(b)(1)–(7)	Compliance Dates for New and Reconstructed Sources.	Yes	Section 63.4083 specifies the compliance dates.
§ 63.6(c)(1)–(5)	Compliance Dates for Existing Sources	Yes	Section 63.4083 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 Startup, Shutdown, and Malfunction.	Yes	Applies only to sources using an and add—on control device to comply with the standards.
§ 63.6(f)(2)–(3)	Methods for Determining Compliance	Yes	
§ 63.6(g)(1)–(3)	Use of an Alternative Standard	Yes	
§ 63.6(h)	Compliance With Opacity/Visible Emission standards.	No	Subpart NNNN 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 §§ 63.4164, 63.4165, and 63.4166.

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

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

Citation	Subject	Applicable to subpart NNNN	Explanation
§ 63.7(a)(2)	Performance Test Requirements—Dates	Yes	Applies only to performance tests for caputre system and control device efficiency at sources using these to comply with the standards. Section 63.4160 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 § 63.4168.
§ 63.8(a)(4)	Additional Monitoring Requirements	No	Subpart NNNN does not have monitoring requirements for flares.
§ 63.8(b)	Conduct of Monitoring	Yes	
§ 63.8(c)(1)–(3)	Continuous Monitoring Systems (CMS) Operation and Maintenance.	Yes	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standard. Additional requirements for CMS operations and maintenance are specified in § 63.4168.
§ 63.8(c)(4)	CMS	No	Section 63.4168 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 NNNN does not have opacity or visible emission standards.
§ 63.8(c)(6)	CMS Requirements	No	Section 63.4168 specifies the requirements for monitoring systems for capture systems and add-on control devices at sources using these to comply.
§ 63.8(c)(7)	CMS Out-of-Control Periods	Yes	
§ 63.8(c)(8)	CMS Out-of-Control Periods and Reporting.	No	Section 63.4120 requires reporting of CMS out-of-control periods.
§ 63.8(d)–(e)	Quality Control Program and CMS Performance Evaluation.	No	Subpart NNNN does not require the use of continuous emissions monitoring systems.
§ 63.8(f)(1)–(5)	Use of an Alternative Monitoring Method	Yes	
§ 63.8(f)(6)	Alternative to Relative Accuracy Test	No	Subpart NNNN does not require the use of continuous emissions monitoring systems.
§ 63.8(g)(1)–(5)	Data Reduction	No	Sections 63.4167 and 63.4168 specify monitoring data reduction.
§ 63.9(a)–(d)	Notification Requirements	Yes	
§ 63.9(e)	Notification of Performance Test	Yes	Applies only to capture system and add-on control device performance tests at sources using these to comply with the standard.
§ 63.9(f)	Notification of Visible Emissions/Opacity Test.	No	Subpart NNNN does not have opacity or visible emission standards.

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

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

Citation	Subject	Applicable to subpart NNNN	Explanation
§ 63.9(g)(1)–(3)	Additional Notifications When Using CMS	No	Subpart NNNN does not require the use of continuous emissions monitoring systems.
§ 63.9(h)	Notification of Compliance Status	Yes	Section 63.4110 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 §§ 63.4130 and 63.4131.
§ 63.10(b)(2)(i)–(v)	Recordkeeping Relevant to Startup, Shutdown, and Malfunction Periods and CMS.	Yes	Requirements for startup, shutdown, and malfunction records only apply to add-on control devices used to comply with the standard.
§ 63.10(b)(2)(vi)–(xi)		Yes	
§ 63.10(b)(2)(xii)	Records	Yes	
§ 63.10(b)(2)(xiii)		No	Subpart NNNN 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 § 63.4120(a)(7).
§ 63.10(c)(9)–(15)		Yes	
§ 63.10(d)(1)	General Reporting Requirements	Yes	Additional requirements are specified in § 63.4120.
§ 63.10(d)(2)	Report of Performance Test Results	Yes	Additional requirements are specified in § 63.4120(b).
§ 63.10(d)(3)	Reporting Opacity or Visible Emissions Observations.	No	Subpart NNNN does not require opacity or visible emissions observations.
§ 63.10(d)(4)	Progress Reports for Sources With Compliance Extensions.	Yes	
§ 63.10(d)(5)	Startup, Shutdown, and Malfunction Reports.	Yes	Applies only to add-on control devices at sources using these to comply with the standard.
§ 63.10(e)(1)–(2)	Additional CMS Reports	No	Subpart NNNN does not require the use of continuous emissions monitoring systems.
§ 63.10(e)(3)	Excess Emissions/CMS Performance Reports.	No	Section 63.4120(b) specifies the contents of periodic compliance reports.
§ 63.10(e)(4)	COMS Data Reports	No	Subpart NNNN does not specify requirements for opacity or COMS.
§ 63.10(f)	Recordkeeping/Reporting Waiver	Yes	
§ 63.11	Control Device Requirements/Flares	No	Subpart NNNN does not specify use of flares for compliance.
§ 63.12	State Authority and Delegations	Yes	
§ 63.13	Addresses	Yes	
§ 63.14	Incorporation by Reference	Yes	
§ 63.15	Availability of Information/Confidentiality	Yes	

TABLE 3 TO SUBPART NNNN 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.

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

TABLE 4 TO SUBPART NNNN 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 3 to this subpart and you only know whether the blend is aliphatic or aromatic.

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

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

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