

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 63**

[Docket ID No. OAR-2003-0178; FRL-7554-3]

RIN 2060-AK59

**National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** This action promulgates national emission standards for hazardous air pollutants (NESHAP) for miscellaneous coating manufacturing facilities. The final rule establishes emission limits and work practice requirements for new and existing miscellaneous coating manufacturing operations, including process vessels, storage tanks, wastewater, transfer operations, equipment leaks, and heat exchange systems, and implements section 112(d) of the Clean Air Act (CAA) by requiring all major sources to meet hazardous air pollutant (HAP) emission standards reflecting application of the maximum achievable control technology (MACT). The HAP emitted from miscellaneous coating manufacturing facilities include toluene, xylene, glycol ethers, methyl ethyl ketone, and methyl isobutyl ketone. Exposure to these substances has been demonstrated to cause adverse health effects such as irritation of the lung, eye, and mucous membranes, effects on the central nervous system, and cancer. We do not have the type of current detailed data on each of the facilities and the people living around the facilities covered by the final rule for this source category that would be necessary to conduct an analysis to determine the actual population exposures to the HAP emitted from these facilities and the potential for resultant health effects. Therefore, we do not know the extent to which the adverse health effects described above occur in the populations surrounding these facilities. However, to the extent the adverse effects do occur, and the final rule reduces emissions, subsequent exposures will be reduced. The final rule will reduce HAP emissions by 4,900 tons per year (tpy) for existing facilities that manufacture miscellaneous coatings.

**EFFECTIVE DATE:** December 11, 2003.

**ADDRESSES:** Docket ID. No. OAR-2003-0178 and A-96-04 are located at the U.S. EPA, Office of Air & Radiation

Docket & Information Center (6102T), 1301 Constitution Avenue, NW., room B108, Washington, DC 20460.

**FOR FURTHER INFORMATION CONTACT:** Mr. Randy McDonald, Organic Chemicals Group, Emission Standards Division (MD-C504-04), U.S. EPA, Research Triangle Park, NC 27711, telephone number (919) 541-5402, electronic mail (e-mail) address [mcdonald.randy@epa.gov](mailto:mcdonald.randy@epa.gov).

**SUPPLEMENTARY INFORMATION:** *Regulated Entities.* Categories and entities potentially regulated by this action include:

Category	NAICS*	Examples of regulated entities
Industry ....	3255	Manufacturers of coatings, including inks, paints, or adhesives.

\*North American Industry Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your facility is regulated by this action, you should examine the applicability criteria in § 63.7985 of the final rule. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

**Docket.** The EPA has established official electronic public dockets for this action under Docket ID No. OAR-2003-0178 and A-96-04. The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. Although a part of the official docket, a public docket does not include Confidential Business Information or other information whose disclosure is restricted by statute. The official public docket is the collection of materials that is available for public viewing at the Air and Radiation Docket in the EPA Docket Center, (EPA/DC) EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation Docket is (202) 566-1742. A reasonable fee may be charged for copying docket materials.

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under the **Federal Register** listings at <http://www.epa.gov/fedrgstr/>. An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at <http://www.epa.gov/edocket/> to view public comments, access the index listing of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Portions of the docket materials are available electronically through Docket ID No. OAR-2003-0178. Once in the system, select "search," then key in the appropriate docket identification number. You may still access publicly available docket materials through the Docket ID No. A-96-04.

**Worldwide Web (WWW).** In addition to being available in the docket, an electronic copy of the final rule will also be available on the WWW through the Technology Transfer Network (TTN). Following signature, a copy of the rule will be placed 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.

**Judicial Review.** Under section 307(b)(1) of the CAA, judicial review of the final NESHAP is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by February 9, 2004. Under section 307(d)(7)(B) of the CAA, only an objection to a rule or procedure raised with reasonable specificity during the period for public comment can be raised during judicial review. Moreover, under CAA section 307(b)(2) of the CAA, the requirements established by the final rule may not be challenged separately in any civil or criminal proceeding brought to enforce these requirements.

**Background Information Document.** The EPA proposed the NESHAP for miscellaneous coating manufacturing on April 4, 2002 (67 FR 16154), and received 81 comment letters and comments from 8 speakers at a public hearing on the proposal. A background information document (BID) ("National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Miscellaneous Coating Manufacturing Industry, Summary of Public Comments and Responses,") containing EPA's responses to each public comment is available in Docket ID No. OAR-2003-0178.

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

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  - H. Executive Order 13211: Actions that Significantly Affect Energy Supply, Distribution, or Use
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## 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 some area sources of

HAP and to establish NESHAP for the listed source categories and subcategories. Major sources of HAP are those that are located within a contiguous area and under common control and have the potential to emit greater than 9.1 megagrams per year (Mg/yr) (10 tpy) of any one HAP or 22.7 Mg/yr (25 tpy) of any combination of HAP.

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

Section 112 of the CAA requires that we establish NESHAP for the control of HAP from both new and existing major sources. The CAA requires the NESHAP to reflect the maximum degree of reduction in emissions of HAP that is achievable, taking into consideration the cost of achieving the emissions reductions, any non-air quality health and environmental impacts, and energy requirements. This level of control is commonly referred to as the maximum achievable control technology or 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 all major sources achieve the level of control already achieved by the better-controlled and lower-emitting sources in each source category or subcategory. For new sources, the MACT floor cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than standards for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources for which the Administrator has emissions information (or the best-performing five sources for which the Administrator has or could reasonably obtain emissions information for categories or subcategories with fewer than 30 sources).

In developing MACT, we also consider control options that are more stringent than the floor. In considering whether to establish standards more stringent than the floor, we must consider cost, non-air quality health and environmental impacts, and energy requirements.

### C. What Is the History of the Source Category?

Section 112 of the CAA requires us to establish rules for categories of emission sources that emit HAP. On July 16, 1992, we published an initial list of 174 source categories to be regulated (57 FR 31576). The listing was our best attempt

to identify major sources of HAP by manufacturing category. Following the publication of that listing, we published a schedule for the promulgation of emission standards for each of the 174 listed source categories. At the time the initial list was published, we recognized that we might have to revise the list from time to time as better information became available.

Based on information we collected in 1995, we realized that several of the original source categories on the list had similar process equipment, emission characteristics and applicable control technologies. Additionally, many of these source categories were on the same schedule for promulgation, by November 15, 2000. Therefore, we decided to combine a number of source categories from the original listing into one broad set of emission standards. On November 7, 1996, we published a **Federal Register** notice combining 21 source categories from the initial list of 174 into the Miscellaneous Organic Chemical Processes source category (61 FR 57602). One of the 21 source categories was the manufacture of paints, coatings, and adhesives.

On November 18, 1999, we published a **Federal Register** notice describing changes to the source category list (64 FR 63035). At that time, we also described our intent to group the source categories into two new source categories instead of one. The two new source categories are called the miscellaneous organic chemical manufacturing source category and the miscellaneous coating manufacturing source category. We proposed the NESHAP for both source categories on April 4, 2002 (67 FR 16154).

Today's action establishes final standards for miscellaneous coating manufacturing (40 CFR part 63, subpart HHHHH). Final standards for miscellaneous organic chemical manufacturing (40 CFR part 63, subpart FFFF) will be published separately.

### D. What Are the Health Effects Associated With the Pollutants Emitted From Miscellaneous Coating Manufacturing?

The CAA was created, in part, "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of the population" (see section 101(b) of the CAA). These NESHAP will protect public health by reducing emissions of HAP from miscellaneous coating manufacturing facilities.

Miscellaneous coating manufacturing facilities emit an estimated 6,900 Mg/yr (7,600 tpy) of HAP. Approximately 30

percent of the HAP emitted by miscellaneous coating manufacturing facilities is toluene, 30 percent is xylene, and glycol ethers, methyl ethyl ketone, and methyl isobutyl ketone account for approximately 25 percent. The final rule reduces total HAP emissions from miscellaneous coating manufacturing facilities by 64 percent. As a result of controlling these HAP, the final NESHAP will also reduce emissions of volatile organic compounds (VOC). A summary of the potential health effects caused by exposure to these pollutants is presented in the preamble to the proposed rule (67 FR 16154).

#### *E. How Did We Develop the Final Rule?*

We proposed the NESHAP for the Miscellaneous Coating Manufacturing source category on April 4, 2002 (67 FR 16154) and provided an 85-day comment period. We received public comments on the proposed miscellaneous coating manufacturing NESHAP from 81 sources consisting of paint, ink, and adhesives manufacturers, industry trade associations, a federal government agency, an environmental group, and other interested parties. In addition, a public hearing was held, at which 8 of 11 speakers provided testimony related to the proposed miscellaneous coating manufacturing rule. A copy of each of the comment letters is available in Docket ID No. OAR-2003-0178.

The final rule reflects full consideration of all the comments we received on the proposed subpart HHHHH, as well as our reassessment of certain data in the rulemaking record. A detailed response to all comments is included in the BID for the promulgated standards (Docket ID No. OAR-2003-0178).

## **II. Summary of the Final Rule**

### *A. What Are the Affected Sources and Emission Points?*

The affected source for the miscellaneous coating manufacturing source category is the miscellaneous coating manufacturing operations at the facility. These operations include storage tanks, process vessels, equipment components, wastewater treatment and conveyance systems, transfer operations, and ancillary sources such as heat exchange systems.

The final standards for miscellaneous coating manufacturing cover vents from process vessels, storage tanks, wastewater, transfer operations, equipment leaks, and ancillary heat exchange operations. Total baseline HAP emissions for the miscellaneous

coating manufacturing source category are estimated to be 6,900 Mg/yr (7,600 tpy).

### *B. What Are the Emission Limitations and Work Practice Standards?*

#### Process Vessel Vents

For stationary process vessels with capacities greater than or equal to 0.94 cubic meters ( $m^3$ ) (250 gallons (gal)) at existing sources, the final rule requires an overall reduction, adjusting for capture and control efficiency based on enclosure tests, as applicable, of at least 75 percent by weight for HAP with a vapor pressure greater than or equal to 0.6 kilopascals (kPa) (0.09 pounds per square inch absolute (psia)), and at least a 60 percent reduction by weight for HAP with a vapor pressure less than 0.6 kPa (0.09 psia). The final rule also provides an emissions averaging alternative for stationary process vessels at existing sources that are equipped with a tightly-fitting vented cover. The overall mass reduction in HAP emissions for vessels in the averaging group must be equal to or greater than the reduction that would have resulted if each of the covered vessels were vented to a control device that achieves a 75 percent emissions reduction for HAP with a vapor pressure greater than or equal to 0.6 kPa (0.09 psia) or a 60 percent emissions reduction for HAP with a vapor pressure less than 0.6 kPa (0.09 psia). The final rule requires that portable process vessels at existing sources with capacities greater than or equal to 0.94  $m^3$  (250 gal) be equipped with a cover. Stationary and portable vessels at new sources must be equipped with a tightly-fitting vented cover, and the vented organic HAP emissions must be reduced by at least 95 percent by weight. Alternatively, for stationary process vessels with capacities greater than or equal to 0.94  $m^3$  (250 gal) at existing and new sources and portable process vessels with capacities greater than or equal to 0.94  $m^3$  (250 gal) at new sources, you may install a tightly-fitting vented cover and vent emissions to a condenser operated at specified temperature limits to satisfy the overall control requirement. Another option for meeting the standards for stationary process vessels at existing sources is to use the vessels to produce coatings with less than 5 percent HAP by weight; no additional control of process vessel vents is required when producing such coatings.

We did not specifically request information on process vessels with capacities less than 0.94  $m^3$  (250 gal). Thus, we do not have information indicating that a sufficient number of

sources are using control devices or other HAP emission reduction techniques to enable us to set a MACT floor based on such devices or techniques. Therefore, the MACT floor for process vessels with capacities less than 0.94  $m^3$  (250 gal) is no emissions reduction. We examined one regulatory alternative that would require the same 75 percent emissions reduction as for larger process vessels. We concluded that the total impacts of this alternative, including cost, non-air quality health and environmental impacts, and energy requirements, are unreasonable in light of the HAP emission reductions achieved. Thus, we did not develop standards for process vessels with capacities less than 250 gal.

#### Storage Tanks

The standards for storage tanks at existing sources require either organic HAP emissions reductions of 90 percent by weight or more, or the use of floating roofs, or vapor balancing if the storage tanks have capacities greater than or equal to 75  $m^3$  (20,000 gal) and store material with an organic HAP vapor pressure greater than or equal to 13.1 kPa (1.9 psia). The standards for storage tanks at new sources require either organic HAP emissions reductions of at least 80 percent by weight, the use of floating roofs, or vapor balancing if the storage tanks have capacities greater than or equal to 10,000 gal and store material with an organic HAP vapor pressure greater than or equal to 0.02 psia. The standards for new sources also require either organic HAP emissions reductions of at least 90 percent by weight, the use of floating roofs, or vapor balancing for storage tanks that have capacities equal to or greater than 75  $m^3$  (20,000 gal) but less than 94  $m^3$  (25,000 gal) and store material that has an organic HAP vapor pressure greater than or equal to 10.3 kPa (1.5 psia), and tanks with capacities greater than 94  $m^3$  (25,000 gal) storing material that has an organic HAP vapor pressure greater than or equal to 0.7 kPa (0.1 psia). The final rule does not include standards for storage tanks smaller than 20,000 gal at existing sources or for storage tanks smaller than 10,000 gal at new sources because the MACT floor for these tanks was determined to be no emissions reduction.

#### Wastewater

For existing sources, the final rule requires that wastewater containing a total partially soluble and soluble HAP load of 750 pounds per year (lb/yr) and a concentration of 4,000 parts per million by weight (ppmw) or greater be treated as hazardous waste or in an

enhanced biological treatment unit. The final rule also allows for offsite treatment provided the affected sources that ship their wastewater to an offsite facility for treatment as a hazardous waste note this fact along with the name of the facility to which the wastewater is shipped in their notification of compliance status report. If the wastewater is shipped offsite for treatment in an enhanced biological treatment unit, the offsite facility must comply with the monitoring, recordkeeping, and reporting requirements in subpart HHHHH. For new sources, the applicability triggers for control are more stringent, affecting all streams that contain partially soluble and soluble HAP at a concentration greater than or equal to 1,600 ppmw.

#### Transfer Operations

Standards for transfer operations at existing and new sources require 75 percent control of HAP emissions from product loading to tank trucks and railcars if the amount of material transferred contains at least 11.4 million liters per year (l/yr) (3.0 million gal/yr) of HAP, and the material has a HAP partial pressure greater than or equal to 10.3 kPa (1.5 psia). Acceptable control strategies also include routing displaced vapors back to the process, or the use of condensers operated below specified temperature limits.

#### Equipment Leaks

The final rule requires compliance with leak detection and repair (LDAR) programs for equipment leaks. Existing sources must comply with the sensory-based LDAR provisions of 40 CFR part 63, subpart R, the NESHAP for Gas Distribution Facilities. Alternatively, existing sources may comply with the LDAR program in 40 CFR part 63, subpart TT, or subpart UU (the National Emission Standards for Equipment Leaks—Control Level 1 and Control Level 2, respectively) because these alternatives are equivalent to or more stringent than the sensory-based LDAR program. New sources must comply with either the subpart TT or subpart UU LDAR provisions. For heat exchange systems at existing and new sources, the final rule requires a leak detection program, consistent with the program in 40 CFR 63.104 (the Hazardous Organic NESHAP (HON)).

Cleaning operations are considered part of the miscellaneous coating manufacturing operations at existing and new sources. Therefore, cleaning fluids are considered to be process fluids, and the requirements for process vessels, storage tanks, equipment leaks, and wastewater systems that apply to

other process operations also apply to cleaning operations.

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

To verify that the required reductions have been achieved, you must either test or use calculation methodologies, depending on the emission stream characteristics, control device, and the type of process vent. Initial compliance demonstration provisions for stationary process vessels at miscellaneous coating manufacturing sources reference the 40 CFR part 63, subpart SS, closed vent system and performance test provisions and the capture efficiency Method 204 in appendix M to 40 CFR part 51. Control devices handling greater than 9.1 Mg/yr (10 tpy) of HAP must be tested, while engineering assessments are allowed for control devices with lower loads and for condensers. Performance test provisions are based on worst case operating conditions for devices controlling process vents.

The initial compliance demonstration procedures reference 40 CFR part 63, subpart SS, for storage tanks complying using control devices and transfer operations, and 40 CFR part 63, subpart WW, for storage tanks complying using floating roofs.

#### D. What Are the Continuous Compliance Requirements?

The final rule requires monitoring to determine whether you are in compliance with emission limits on an ongoing basis. This monitoring is done either by continuously measuring HAP emissions reductions or by continuously measuring a site-specific operational parameter, the value of which you would establish during the initial compliance demonstration. These parameters are required to be monitored at 15-minute intervals throughout the operation of the control device. For control devices that do not control more than 1 tpy of HAP emissions, only a daily verification of the operating parameter is required, as is provided in 40 CFR part 63, subpart GGG. To demonstrate compliance with work practice standards, such as the requirement to maintain floating roofs, inspection of equipment serves as the monitoring demonstration.

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

The final rule requires recordkeeping and initial and semiannual reporting. The initial notification is required within 120 days of the effective date of the NESHAP. That report, which is very brief, serves to alert appropriate

agencies (State agencies and EPA Regional Offices) of the existence of your affected source and puts them on notice for future compliance actions. The precompliance report details compliance alternatives that require preapproval and is required 6 months prior to the compliance date. The notification of compliance status (NOCS) report, which is due 150 days after the compliance date of the NESHAP, is a comprehensive report that describes the affected source and the strategy being used to comply. The final rule also incorporates a number of provisions in subpart A of 40 CFR part 63 (General Provisions), among them the startup, shutdown and malfunction provisions.

### III. Summary of Environmental, Energy, and Economic Impacts

#### A. What Are the Air Emission Reduction Impacts?

We estimate nationwide baseline HAP emissions from the miscellaneous coating manufacturing sources to be 6,900 Mg/yr (7,600 tpy). We project that the final rule will reduce HAP emissions by about 4,400 Mg/yr (4,900 tpy). Because many of the HAP emitted by miscellaneous coating manufacturing facilities are also VOC, the proposed NESHAP will also reduce VOC.

Combustion of fuels to generate electricity and steam will increase secondary emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and sulfur dioxide (SO<sub>2</sub>) by about 25 Mg/yr (27 tpy). These impacts were estimated assuming electricity is generated in coal-fired power plants and steam is produced in natural gas-fired industrial boilers.

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

The cost impacts include the capital cost to install control devices and monitoring equipment, and include the annual costs involved in operating control devices and monitoring equipment, implementing work practices, and conducting performance tests. The annual cost impacts also include the cost savings generated by reducing the loss of product or solvent in the form of emissions. The total capital costs for existing sources are estimated to be \$57 million, and the total annualized costs for existing sources are estimated to be \$16 million. Total capital costs for new sources are estimated to be \$1.3 million per new facility and total annualized costs are estimated to be \$.25 million per new facility. Three new facilities were estimated in the first 3 years after promulgation of this rule.

We estimate that in the first 3 years after the effective date of 40 CFR part 63, subpart HHHHH, that the annual cost burden will average \$3,500/yr per respondent for recordkeeping and reporting requirements for an estimated 129 sources. Most of these costs are for new and reconstructed sources that must be in compliance upon startup; other costs are for existing sources to prepare initial notifications and plans. In the fourth year after the effective date, existing facilities must begin to monitor and record operating parameters to comply with operating limits and prepare compliance reports. These activities will significantly increase the nationwide annual burden.

We expect that the actual compliance cost impacts of the NESHAP will be less than described above because of the potential to use common control devices, upgrade existing control devices, implement emissions averaging, or comply with the preset temperature limits for condensers. Because the effect of such practices is highly site-specific and data were unavailable to estimate how often the lower cost compliance practices could be utilized, we could not quantify the amount by which actual compliance costs will be reduced.

#### C. What Are the Economic Impacts?

The economic impact analysis shows that the expected price increase for affected output would be 0.3 percent as a result of the NESHAP for miscellaneous coating manufacturers. The expected change in production of affected output is a reduction of 0.1 percent as a result of the final rule. One plant closure is expected out of the 127 facilities affected by the final rule. It should be noted that the baseline economic conditions of the facility predicted to close affect the closure estimate provided by the economic model, and that the facility predicted to close appears to have low profitability levels currently. Therefore, no adverse impact is expected to occur for those industries that produce output affected by the NESHAP, such as paints, inks, and adhesives.

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

We do not expect wastewater, solid waste, or hazardous waste to be generated from controlling HAP emissions from miscellaneous coating manufacturing facilities. Thus, we expect no non-air quality health impacts from controlling HAP emissions from miscellaneous coating manufacturing facilities. We expect the overall energy

demand (*i.e.*, for electricity generation and steam production) to increase by an estimated 32,000 gigajoules per year (30.0 billion British thermal units per year (Btu/yr)).

### IV. Summary of Responses to Major Comments

#### A. What Changes to Applicability Did the Commenters Suggest?

*Comment:* A number of commenters opposed regulation of activities such as mixing additives and other ingredients, thinning, and adjusting tint by facilities that are the end-users of coatings and are subject to any of the surface coating NESHAP; several of the commenters described these activities as “affiliated operations,” and they concurred with the definition and draft preamble language for the Paper and Other Web Coating (POWC) NESHAP that were discussed during POWC stakeholder meetings on May 22 and June 26, 2002.<sup>1</sup> For example, several of the commenters requested specific exemptions for affiliated operations at facilities subject to surface coating rules in subpart GG (National Emission Standards for Aerospace Manufacturing and Rework Facilities), subpart KK of 40 CFR part 63 (NESHAP for the Printing and Publishing Industry), and/or subpart JJJJ of 40 CFR part 63 (NESHAP: Paper and Other Web Coating). Another commenter requested an exemption for the onsite formulation and mixing of specialty, ablative coatings that are applied to space vehicles at a National Aeronautics and Space Administration (NASA) site and are exempt from control under subpart GG of 40 CFR part 63. Two commenters requested specific language in either the preamble or final rule to clarify that operations at facilities subject to subpart DDDD of 40 CFR part 63 (the plywood and composite wood products NESHAP) are not subject to subpart HHHHH of 40 CFR part 63. Another commenter also suggested extending the provision to all equipment associated with a process for which another 40 CFR part 63 standard has been promulgated. One commenter stated that end users, particularly those at facilities subject to subpart MMMM of 40 CFR part 63 (NESHAP: Surface Coating of Miscellaneous Metal Parts and Products), should be exempt because subpart MMMM already addresses emissions associated with the use of diluents at such facilities. Another commenter noted that the exemption in § 63.7985(a)(4) of operations that are part of an affected

source under another subpart of 40 CFR part 63 should apply to end-users subject to subparts MMMM, IIII (auto surface), and PPPP (plastic parts and products) because affiliated operations are part of the affected sources under those rules. One commenter requested clarification that the exemption in § 63.7985(a)(4) is not limited only to operations that are required to implement controls under other standards.

Two commenters requested exemptions for affiliated operations at facilities subject to any of the surface coating NESHAP. According to the commenters, the exemption is necessary because we obtained no information on end-users while developing subpart HHHHH, some of the regulated community would not have an opportunity to comment on the proposal because some of the surface coating rules will not be published until after subpart HHHHH is finalized, and we considered emissions from affiliated operations in some surface coating source categories to be insignificant when we were developing the surface coating NESHAP. To exclude end users in general, one commenter recommended more clearly defining “coatings manufacturing” with a definition similar to that for “batch process” in subpart GGG of 40 CFR part 63, using a more narrow listing of Standard Industrial Classification (SIC) and North American Industrial Classification System (NAICS) codes, and adding specific exemptions for temporary activities such as mixing prior to painting a tank or structure at a major source.

*Response:* The final rule does not apply to activities conducted by end users of coating products in preparation for application. As noted by some of the commenters, we have decided to exempt affiliated operations at POWC facilities from subpart HHHHH. In the preamble to the final POWC surface coating MACT rule (67 FR 72330, December 4, 2002), we define affiliated operations at POWC facilities and indicate that they are part of the POWC source category, but they are not part of the POWC affected source for a variety of reasons. We also examined other surface coating rules, and determined that the exemption for affiliated operations should also be applied to sources that are subject to the printing and publishing rule (subpart KK), the aerospace manufacturing rule (subpart GG), the metal coil coating rule (subpart SSSS of 40 CFR part 63), and the miscellaneous metal parts and products rule (subpart MMMM). These five rules lack requirements for affiliated

<sup>1</sup> The final POWC NESHAP was published on December 4, 2002 (67 FR 72330).

operations, but affiliated operations were considered during the development of the rules and controls were determined not to be warranted. We have not extended this exemption to other surface coating rules (or certain other rules) that already include affiliated operations as part of the affected source under the applicable subpart because operations that are part of another affected source are exempt from the final subpart HHHHH according to § 63.7985(a)(4). One commenter's assumption that this exemption is not limited to those operations within another affected source that must implement controls is correct. Preparations for painting equipment or structures at a facility are not part of a manufacturing process and thus are not subject to subpart HHHHH.

*Comment:* Several commenters recommended clarifying the provision in § 63.7985(c)(3) of the proposed rule that would exempt all equipment associated with a process that has less than 5 percent HAP in process vessels. One commenter noted that this provision will not exempt all water-based coating manufacturing because the actual HAP content in the process vessel varies during the process. To be useful, this commenter stated the determination must be based on the HAP content of the final product. According to another commenter, the exemption should be based on "organic" HAP, and sources should be allowed to determine this percentage based on material safety data sheets (MSDS) or other available information as an alternative to chemical analysis. One commenter suggested that the exemption would be less confusing if it were applied to individual vessels rather than a "coating process" because equipment is generally associated with a specific process vessel and the definition of "process" is too broad. One commenter also stated that if a process vessel is not subject to control because its capacity is less than 250 gallons or the HAP emissions are less than 50 parts per million by volume (ppmv), then it is also reasonable that no other requirements should apply to any of the equipment associated with that process vessel (*i.e.*, the storage tank, equipment leak, and wastewater standards).

To minimize the compliance burden, one commenter requested exemptions for impurities and trace constituents present in quantities less than 0.1 percent by weight for carcinogens and less than 1.0 percent by weight for all other HAP, values which are consistent with the levels that must be provided on MSDS. The commenter stated that this would reduce the burden of determining

the HAP content in a vessel for comparison with the 5 percent exemption level and for determining the HAP content in process vessel vents for comparison to the 50 ppmv limit.

*Response:* Under the proposed rule, whenever the contents of a process vessel contain less than 5 percent HAP by weight, the owner or operator would be exempt from all requirements for the process vessel and related equipment. Under the final rule, this provision has been replaced with a provision that provides for compliance with the stationary process vessel standards at existing sources when the vessel is being used to manufacture a coating that contains less than 5 percent HAP by weight. Our rationale for allowing the mass limit as an alternative standard is based on an estimated equivalent reduction in HAP emissions as compared to complying with the process vessel standards. Although we did not collect specific data on coatings content, we reviewed information that we collected in the development of standards for other coating manufacturing source categories. Based on these data, we concluded that we could achieve equivalent reductions in HAP emissions if coating manufacturers reduce the HAP content of final products to less than 5 percent by weight. In order to achieve equivalent reductions of 75 percent for process vessels, the average HAP content of coatings would have to be greater than 20 percent. Other data collection efforts support the conclusion. For example, the average HAP levels in all the solventborne coatings reported in the metal can and wood building products source categories are 32 and 28 percent, respectively. On a consumption-weighted basis, the HAP content of coatings in the metal can source category is 20 percent. Further, although the HAP content of many water-based coatings is less than 5 percent by weight, we did not include an explicit exemption for waterborne coatings because the HAP content of some waterborne coatings could be relatively high as long as the HAP is soluble in water.

In developing this alternative, we are persuaded by one commenter's suggestion to apply it to all vessels that are associated with the manufacturing of the final product. Although another commenter suggested that identifying all process vessels in a manufacturing process would be confusing, we think that this alternative would actually simplify compliance for most owners and operators. As long as the process vessel meets the definition in the final rule, an owner or operator could comply

with the alternative standard when the vessel was processing material that would ultimately contain less than 5 percent HAP by weight as final product.

To further eliminate confusion, we clarified that the alternative applies only to process vessels. Storage tanks are not considered because their control requirements are determined based on the size of the tank and the HAP partial pressure, not whether the tank is used for an individual product. Transfer operations are not considered because their control requirements are determined based on the total annual quantity of coating that is loaded and its weighted average partial pressure. Equipment leaks also are not considered because the need for control is determined by the number of hours a particular component is in organic HAP service within the affected source, not the specific product being produced. Also, we did not exempt wastewater streams from process vessels smaller than 250 gal because we have no evidence that such vessels are cleaned by a different procedure than larger vessels or that the wastewater streams from such cleaning operations are kept separate.

We did not allow in the final rule a *de minimis* exemption of 0.1 or 1 weight percent HAP for trace constituents. This exemption is not relevant to the 5 weight percent HAP product alternative standard. Further, we do not feel that an additional *de minimis* or trace constituent exemption for compliance with the remaining standards is necessary.

*Comment:* One commenter recommended establishing applicability based on the affected source rather than the major source so that small coating manufacturing operations co-located with large surface coating sources are not subject to subpart HHHHH.

*Response:* We have not made the suggested change because the definition of a "major source" encompasses an entire plant site without being subdivided according to industrial classifications or activities. This definition is contained in section 112(a)(1) of the CAA, which includes "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 considering controls, in the aggregate, 10 tpy or more of any HAP or 25 tpy or more of any combination of HAP."

*Comment:* One commenter requested an exemption for processes with uncontrolled emissions less than 10,000 lb/yr.

*Response:* We have not incorporated the requested exemption because it is not supported by the available data.

*Comment:* One commenter requested an exemption for waterborne coatings.

*Response:* We have not included an explicit exemption for waterborne coatings because the HAP content of a waterborne coating could be relatively high as long as the HAP is soluble in water. However, a source can reformulate coatings to contain less than 5 percent HAP as a means of meeting the process vessel vent emission limits and work practice standards for existing sources.

*Comment:* One commenter requested an exemption for low vapor pressure HAP.

*Response:* We did not provide an exemption for low vapor pressure HAP materials because we could not justify a no emissions reduction MACT floor for these materials based on our information. We did not collect information that could be used to support the concept that process vessels containing only low vapor pressure materials would not be controlled to the same levels as those containing higher vapor pressure materials. Further, we reviewed HAP storage tank throughput at facilities that reported control of process vessels, and noted that lower vapor pressure HAP, such as glycol ethers and ethylene glycol, were also used at these facilities. However, for the final rule, we have written the standard for stationary process vessels at existing sources to require 75 percent reduction only for HAP with a vapor pressure greater than or equal to 0.6 kPa. We made this change based on a revised analysis that showed the total impacts of the regulatory alternative are unreasonable for HAP with vapor pressures less than 0.6 kPa. Thus, these HAP must be controlled to the MACT floor level of 60 percent.

*Comment:* Three commenters requested clarification of how to determine whether 40 CFR part 63, subpart FFFF, or 40 CFR part 63, subpart HHHHH, applies to their operations. One commenter noted that the proposed definition of "coating manufacturing" is expansive and would unnecessarily subject facilities to both subparts.

*Response:* If the product being manufactured is a coating, and the manufacturing steps involve blending, mixing, diluting, and related formulation operations, without an intended reaction, then the process is subject to subpart HHHHH. If a reaction as well as various other operations are involved, then the process typically is subject to subpart FFFF. However, if the

downstream formulation operations are distinct from the preceding synthesis process(es), (perhaps because the synthesized product is isolated and some of it is sold or transferred offsite), then the formulation operations are subject to subpart HHHHH, and the synthesis operations are subject to subpart FFFF. In the event that equipment used for manufacturing products in processes that are subject to subpart FFFF is also used for coating manufacturing operations that are subject to subpart HHHHH, then the primary use of the equipment determines applicability.

#### *B. How Did We Develop the Standards?*

*Comment:* According to one commenter, the lack of standards for all HAP is unlawful. The commenter cited hydrogen chloride (HCl), hydrogen fluoride, chlorine, potassium compounds, and maleic and phthalic anhydrides as examples of HAP that are not regulated. Another commenter recommended listing the HAP that are subject to the final rule, or cross-referencing Table 2 in subpart F of the HON.

*Response:* The standards in subpart HHHHH apply to all HAP that are used in coating manufacturing. Of the six compounds cited by the first commenter, only HCl and phthalic anhydride are listed in our database. All process vessels larger than 250 gallons that emit any HAP, including the six cited by the first commenter, must be controlled. We did not list the HAP in the final rule because the rule applies to all HAP listed in the Clean Air Act.

*Comment:* One commenter stated that the thresholds in the proposed subpart HHHHH unlawfully exempt emission points from control. According to the commenter, all emission points must be controlled.

*Response:* We disagree that every emission point at a major source must be required to reduce emissions. First, section 112(a) of the CAA defines "stationary source" (through reference to section 111(a)) as: " \* \* \* any building, structure, facility, or installation which emits or may emit any air pollutant \* \* \* ." (42 U.S.C. 7412(a)(3) and 7411(a)(3)). The General Provisions for the MACT program define the term "affected source" as " \* \* \* the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a section 112(c) source category or subcategory for which a section 112(d) standard or other relevant standard is established pursuant to section 112 \* \* \* ." (40 CFR 63.2). Nothing in the definition of

"stationary source" or in the regulatory definition of "affected source" states or implies that each emission point or volume of emissions must be subjected to control requirements in standards promulgated under CAA section 112.

Further, even under the commenter's interpretation of "stationary source," the Agency would still have discretion in regulating individual emission sources. Section 112(d)(1) of the CAA allows the Administrator to " \* \* \* distinguish among classes, types, and sizes of sources within a category or subcategory in establishing such standards \* \* \* ." We interpret this provision for the miscellaneous coating manufacturing NESHAP, as we have for previous rules, as allowing emission limitations to be established for subcategories of sources based on size or volume of materials processed at the affected source. Under the discretion allowed by the CAA for the Agency to consider sizes of sources, we made the determination that certain small-capacity and low-use operations (e.g., smaller storage tanks) can be analyzed separately for purposes of identifying the MACT floor and determining whether beyond-the-floor requirements are reasonable. In addition, our MACT floor determinations for certain categories (e.g., stationary process vessels), which are set according to section 112(d)(3) of the CAA, reflect the performance levels of the best-performing sources for which we had information, including vapor pressure thresholds or cutoffs below which the best-performing sources do not reduce emissions.

In general, our MACT floor determinations have focused on the best-performing sources in each source category, and they consider add-on control technologies as well as other practices that reduce emissions. As part of our information collection effort, we requested information on emission reduction measures. We generally did not receive information indicating that, for the emission points covered by 40 CFR part 63, subpart HHHHH, sources are currently reducing emissions through measures other than control technologies (e.g., by fuel switching or raw materials or process changes) in sufficient numbers to support a MACT floor based on such measures. Accordingly, our standards include a performance level that represents the level achieved by the best control technology, and a threshold or cutoff that represents the lowest emission potential that is controlled by the best 12 percent of sources. Because the miscellaneous coating manufacturing source category is broad in terms of the

numbers and types of processing operations that are covered, one challenge was to develop a format by which all sources could be compared to each other to establish the best-performing sources. The performance level generally is of the format that can be applied to different types of control technology and processes and is generally consistent with existing State and local rules. Thus, different types of control technology and emission levels resulting from existing rules are captured in our MACT floor analysis. The cutoff allows owners and operators that have reduced their emissions below a certain level using one or more methods, including process changes to reduce or eliminate pollution at the source, to comply without additional control. Both performance levels and cutoffs have been set to account for variations in emission stream characteristics so that the standards can be applied consistently across the source category. This approach is consistent with the language of CAA section 112(d)(3) that requires us to set the MACT floor based on the best-performing 12 percent of existing sources.

### C. Standards for Process Vessels

*Comment:* One commenter is not convinced that the existing source MACT floor for portable vessels should be only a cover because some portable vessels have a cover plus add-on control devices, and the actual performance of a covered vessel varies depending on the type of cover and other factors such as the HAP content and vapor pressure of the material being processed. Similarly, the commenter also objected to the existing source MACT floor for stationary process vessels, claiming that it does not reflect the actual performance of the best performers, and that we have not accounted for various factors that affect the performance.

Other commenters indicated that the existing source MACT floor is too stringent, or at the very least the control level should not be increased from 60 percent to 80 percent. For example, one commenter is not convinced that 6 percent, or the average of the best performing 12 percent, are controlled because many of the controls are applied only to vessels with specific characteristics rather than facility-wide. Another commenter questioned the validity of averaging uncontrolled sources with controlled sources in developing the MACT floor, and concluded that the floor should be no control. In response to a solicitation for comment regarding the setting of the floor based on the mean or the median

of controlled vessels (*i.e.*, 60 percent versus 80 percent control, respectively), the commenter stated the mean is appropriate for several reasons: (1) There are sufficient data points to use the mean, (2) 60 percent represents a real-world technology, (3) EPA claimed in MACT floor memoranda that the mean is a better measure of the central tendency of the data, (4) EPA indicated during the stakeholder process that the mean would be used as it is representative of the industry and consistent with Congress' intent under the CAA, and (5) EPA guidelines for MACT determinations under CAA section 112(j) state that the MACT floor should be based on the mean unless there is a large discrepancy between the emission reductions achieved by available control options (which the commenter indicated is not the case here because control efficiencies are uniformly distributed between 2 and 99 percent). Numerous other commenters simply stated that the MACT floor has been adequately characterized, and should not be revised.

Nearly all of the commenters objected to the apparent requirement for 100 percent capture of emissions for the new and existing source MACT floors for stationary process vessels, and they stated the floor control levels should specify only the efficiency of the control device. They expressed particular concern with a statement in the preamble to the proposed rule that indicated covers must be sealed and gasketed. The commenters noted that 100 percent capture is not feasible (and, therefore, not achieved in practice except possibly if using chemical reaction type vessels and closed solids charging systems) because covers often must include an opening for an agitator shaft, and vessels must be opened periodically to take samples, add material, and perform inspections. They also noted that this requirement contradicts our position in stakeholder meetings and background memoranda, and they concluded that the information collection request (ICR) data do not support a capture component to the floor (*i.e.*, only information about the control efficiency was requested). Even if actual capture efficiencies are allowed, they noted that the proposed overall capture plus control efficiency of 95 percent for process vessels at new sources would be virtually impossible to achieve because it effectively requires nearly 100 percent capture.

Numerous commenters objected to the requirement that emissions from cleaning are subject to control, at least if the vessel does not have an automatic wash system. One commenter noted that

most vessels are cleaned by hand, but even vessels that have automatic wash systems must be opened for inspections after cleaning.

*Response:* We did not adjust the MACT floors for portable or stationary vessels. For portable vessels, the MACT floor is to equip each vessel larger than 250 gal with a cover. Our data show that less than 6 percent of portable vessels are equipped with add-on control devices, but over 90 percent are equipped with covers. We did not receive information regarding any other emission reduction techniques besides the use of covers or add-on control devices for portable vessels in responses to our ICR request for such information. Thus, we do not have information indicating that a sufficient percentage of sources to set a floor are using any emission reduction techniques other than covers, and we cannot support a floor determination based on the use of any other techniques.

Our database includes information for 4,628 stationary process vessels larger than 250 gal. Six percent of all stationary process vessels corresponds to a total of 278 vessels. A total of 368 vessels are equipped with some type of add-on device, or about 8 percent. The average control of the best-performing 12 percent (60 percent reduction) represents a technically feasible level of control and, therefore, we disagree with the assertion that the floor should be no control. The average control efficiency was determined for 368 vessels, including 278 controlled vessels and factoring in no control for the remaining 187 top records.

The commenters also contended that reported efficiencies do not consider capture efficiency. Of the 378 vessels that are controlled, over 278 (6 percent of the stationary process vessels) reported either direct ventilation to control devices, reported closed vent systems to control devices, or reported operating essentially 100 percent capture (routing building exhausts to an incinerator a capture system) and control. Therefore, we concluded that it is appropriate to set the existing source MACT floor for stationary process vessels larger than 250 gal on an overall control efficiency based on the reported efficiencies.

The new source MACT floors for portable and stationary process vessels larger than 250 gal are based on the best-performing source. For both portable and stationary process vessels, the best-performing source covers the vessels and vents emissions through a closed-vent system to a thermal incinerator with an overall control efficiency of 95

percent. Thus, the MACT floors are based on these conditions.

We recognize that basing MACT floors for stationary and portable vessels on capture and control does not overtly consider fuel, materials, process, or similar changes that could result in lower overall mass emissions. However, based on the information we have, we cannot accurately quantify a level of mass emissions that could result from such emission reduction techniques as a MACT floor and that could be achieved by all coating manufacturers given the variability in processing operations, the scale of processing operations, and products manufactured.

We did not specifically request information for portable or stationary process vessels with capacities less than 250 gal, and we do not have any such information. We set a MACT floor of no emissions reductions because we do not have information indicating that a sufficient percentage of sources are using emission reduction techniques or add-on controls to enable us to set a MACT floor.

The MACT floor for stationary process vessels at existing sources is based on overall control. Thus, the final rule specifies that these process vessels must either be equipped with tightly-fitting vented covers and closed vent systems meeting the requirements of subpart SS of 40 CFR part 63. We have decided to exempt some emissions releases that result from safety and hygiene practices because it is unlikely that these vents would reach the 50 ppmv concentration level defined to be a process vessel vent. The exemption also will relieve owners and operators from the burden of demonstrating that they meet the concentration level. Specifically, the definition of process vessel vent excludes flexible elephant trunk systems that draw ambient air (*i.e.*, systems that are not ducted, piped, or otherwise connected to the unit operations) away from operators that could be exposed to fumes when vessels are opened. As an alternative, capture efficiency must be considered in the overall control efficiency determination if vessels are not equipped with tightly-fitting vented covers and closed vent systems. Opening of covers for addition of materials, sampling, etc., is included as part of the capture efficiency demonstration. For new sources, the final rule requires the use of tightly-fitting vented covers to controls; determining capture is not an option because, as the commenters noted, achieving 95 percent overall control would require nearly 100 percent capture.

Finally, we have not required control of cleaning that is accomplished manually. However, emissions resulting from automatic wash systems are required to be considered and controlled. Similarly, control is required for emissions resulting from flushing of lines or other equipment with solvent at the end of a batch because these are closed operations.

*Comment:* Most of the commenters stated that the standard for stationary process vessels at existing sources should be set at the MACT floor. According to the commenters, the cost of the regulatory alternative is unreasonable because our analysis overstated the uncontrolled emissions, used unrealistic model plant and emission stream characteristics, and understated the costs.

The commenters disputed our estimate of uncontrolled emissions for a number of reasons. Their primary argument is that using the Emission Inventory Improvement Program (EIIP) equations would give a more accurate estimate of the HAP emissions than the AP-42 VOC emission factor. They noted that EPA has identified the EIIP equations as the preferred method, companies use them as the basis for title V permits, States prefer them for permitting and compliance demonstrations, and EPA specifies the use of similar equations in 40 CFR part 63, subpart GGG. Conversely, they noted that the AP-42 VOC emission factor is inappropriate because, typically, half or less of the VOC is HAP; the factor is meant to estimate emissions from the entire process, not just stationary process vessels; and the industry has shifted to less volatile solvents in recent years. One commenter provided data showing that the EIIP methodology, calibrated with stack testing, results in emissions equal to about 0.2 to 0.6 percent of HAP throughput. Another commenter also noted that our baseline emissions estimate exceeds facility-wide Toxic Release Inventory (TRI) emissions (which also include non-HAP, fugitives, emissions from portable vessels, and emissions from other processes) by factors between 3 and 36. The commenter also does not believe that 5 facilities generate half of the emissions in the source category. For example, the commenter contacted the facility in our database with the highest estimated emissions and determined that only 2 percent of the solvent throughput is attributable to the manufacture of inks and coatings; the remainder is associated with the distribution of paint thinners and paint reducers.

The commenters considered many of the model plant parameters and

emission stream characteristics to be unrealistic. Related to their concerns that 100 percent capture is infeasible, they noted that local exhaust ventilation systems usually convey large volumes of air to minimize worker exposure, reduce the risk of fires, and contain dust. As a result of the high air flow rates, they noted that the HAP concentration is much lower than the 40,000 ppmv in our impacts analysis. Based on stack test data, one commenter stated that actual concentrations are less than 1,200 ppmv. Another commenter indicated the concentrations are in the hundreds of ppmv. The commenters noted that for toluene, the surrogate HAP used in our analysis, 40,000 ppmv is within the flammable range, which poses safety concerns and would necessitate the use of expensive fire/explosion prevention equipment and inerting systems. One commenter stated that xylene should be used as the surrogate HAP because it is now four times more prevalent than toluene. The commenters noted that the model included emissions only from filling, but emissions also result from other process steps such as mixing, gas sweep, heat-up, holding, emptying, and cleaning. They also disagreed with the assumption that a control device needs to be sized to handle emissions from only 5 vessels at a time. For example, one commenter indicated that many facilities have dozens of process vessels being filled simultaneously (as much as 50 to 75 percent of all vessels onsite). Another commenter noted that each vessel would have to have its own condenser because a common header poses safety and product quality risks. One commenter objected to the assumption that condensers can be used to control all process vessels because water cooled condensers will not be effective for the low concentration (and high flow) streams in the industry, and condensers are meant to operate for long periods of time under steady-state conditions, not intermittently during filling steps.

According to this commenter, our cost analysis included a number of errors and deficiencies. For example, the analysis did not include the cost to replace existing vessels with chemical reaction type tanks and raw material addition equipment, which would be needed to even approach 100 percent capture. If cleaning emissions must be controlled, the commenter indicated that a cost for automatic wash systems must be included. Fire and safety instrumentation and systems would be needed since the model operates with toluene in the flammable range.

Even if condensers are assumed to be applicable for all process vessels (which

the commenter opposed), the commenter noted the following concerns with the analysis: (1) Solvent recovery is not feasible because the condensed solvent is contaminated with condensed water vapor (and must be disposed of as hazardous waste); (2) the amount of coolant piping and valves per condenser is underestimated; (3) baghouses will be needed upstream of the condenser to remove particulate if solid materials are added to the process vessel; (4) two-stage rather than single stage condensers will be required to operate at the model operating temperature of 32°F; (5) the refrigeration unit needs to be large enough to service 75 percent of the facility's condensers; and (6) costs are needed for foundations and supports, electrical components, instrumentation, insulation, site preparation, and buildings.

The commenter also stated the analysis understates the incremental cost effectiveness relative to the floor because it used uncontrolled emissions rather than baseline emissions; the condenser count is incorrect for more than 30 facilities; the costs for covers were not included for the vessels that do not currently have them; the results reported in \$/Mg are actually in \$/ton; and the saturation toluene concentration is 37,370 ppmv, not 40,000 ppmv. Based on a sensitivity analysis that incorporates some of these suggested changes and looks at a range of emission stream flows, HAP concentrations, and control devices, the commenter estimated that costs are at least 5 to 20 times higher than our estimate. The commenter noted that these estimates are conservatively low because they do not include costs for chemical reaction tanks, raw material addition equipment, and fire safety equipment; they also do not consider the impact of using a less volatile surrogate HAP on emission reductions. Even without changing the elements in the analysis, the commenter stated that we should consider the average facility cost effectiveness value rather than the nationwide value because a majority of the facilities in the analysis have incremental costs above \$3,500/Mg; typically, these facilities are small or produce predominately water-based coatings.

*Response:* We agree that the EIIP guidance is appropriate for use in estimating emissions from coating manufacturing process sources. We did not use EIIP models because we did not have the level of detail required to conduct emission estimates from the facilities in our database. We considered the 1 to 2 percent solvent throughput values contained in the Chapter 5 AP-42 documentation to be adequate in

characterizing the level of emissions for nationwide impacts. And, although one commenter indicated that the EIIP methodology would result in HAP emissions between 0.2 and 0.6 percent of HAP throughput for his facilities, this commenter also calculated a loss of 1.3 percent for one facility due to more conservative assumptions associated with that facility's operations. While our 1 percent factor may be conservative, it was a reasonable value for the impacts analysis. The commenters noted that the AP-42 VOC emission factor is inappropriate because, typically, half or less than half of the VOC is HAP; however, because the factor is based on HAP throughput, only the portion of solvent that is HAP is considered, and therefore, basing the emissions on HAP throughput appropriately limits the estimates to HAP, not VOC. Regarding the comment that our baseline emissions estimate exceeds facility-wide TRI emissions, we note that one commenter indicated that baseline HAP emissions total 6.3 million pounds for all 127 facilities in the database, as compared to our estimate of 13.5 million pounds, roughly a factor of two. Because of the uncertainty associated with estimation methods, and varying operational practices from site to site, these estimates are reasonable.

Regarding assumptions made in our cost analysis of the regulatory alternative for stationary process vessels, we note that the low overall control efficiency (75 percent) enables numerous control scenarios for achieving compliance, including those scenarios where air flows are increased to enable proper capture of emissions from opening in vessels. While we did not cost out this alternative for presentation of impacts, it would likely be a scenario employed by owners and operators. As discussed previously, the two predominant types of control devices are condensers and thermal incinerators. Therefore, to further examine the cost effectiveness of the regulatory alternative, we evaluated the cost effectiveness of applying a capture and control system using thermal incineration. We started with the analyses generated by one commenter, which are based on EPA's COST-AIR control cost spreadsheets for regenerative thermal oxidizers and included the commenter's estimated installation costs for ductwork, auxiliary equipment, vapor collection systems and lids for tanks. The commenter also noted that cost calculations did not include chemical reaction type tanks to approach 100 percent capture, automatic cleaning systems, raw

material addition equipment, baghouses or fire control system costs. We also excluded chemical reaction tanks and raw material feed equipment because they would not be needed when high air flow rates and a capture system are used to collect and route emissions from the existing tanks to a thermal incinerator.

The commenter apparently generated an industry-wide cost effectiveness estimate for thermal oxidizers from average flow and concentration value ranges. The commenter did not provide enough information to methodically step through the procedure to arrive at the resulting value of \$16,138/Mg. In fact, it was not clear whether the commenter selected ranges of concentrations and flowrates corresponding to 36 stack test data points and then calculated cost effectiveness values from the midpoints of these ranges or whether the commenter calculated the cost effectiveness of 36 stack test data points and developed an arithmetic average. We note that the table supplied by the commenter identifying concentration and flowrate ranges indicates that flowrates and concentrations were considered to be independent of each other and produced a counterintuitive result that flowrate and concentrations would be directly proportional, as opposed to inversely proportional. For example, the low flow rate range midpoint values were listed as 300 cubic feet per minute (cfm) and 50 ppmv, while the high flowrate range midpoints were listed as 7,500 cfm and 1,750 ppmv. We would expect that as flowrates increased, concentrations would decrease, and we concluded that an analysis resulting from the use of these ranges would likely not represent the actual emission stream characteristics. Further, we estimated the cost effectiveness of incinerator controls for these 5 ranges and obtained values ranging from \$290,000/Mg for the 300 cfm, 50 ppmv concentration stream to \$400/Mg for the stream with 7,500 cfm and 1,750 ppmv, indicating a wide range of cost effectiveness.

We reasoned that a more representative evaluation would be based on a selected model emission stream. This model stream was based on a common value resulting from the histogram presented by the commenter; we selected as model emission stream characteristics a flowrate of 5,000 standard cubic feet per minute (scfm) waste gas and a concentration of 500 ppmv. Our analysis indicated that the cost effectiveness value for this model stream would be \$2,200/Mg, assuming only 75 percent reduction of potential HAP emission was achieved. Based on

this result, we concluded that an evaluation of capture and control systems using thermal incineration would result in reasonable costs.

Our original analysis that was the basis for selecting the 75 percent regulatory alternative based on condenser control is still valid and the total impacts, considering the emission reduction achieved as well as cost, non-air quality health and environmental impacts, and energy requirements, are reasonable. Thus, we continue to base the standard for stationary process vessels at existing sources on the regulatory alternative. However, the commenter has pointed out valid concerns regarding our assumptions. Upon review, we agree that we mistakenly overestimated reductions from the regulatory alternative by approximately 15 percent from the uncontrolled levels. Therefore, our estimated total reductions for the regulatory alternative should be on the order of 4,400 Mg/yr, not 5,000 Mg/yr. The revised incremental HAP reduction achieved by the regulatory alternative is about 1,000 Mg/yr, and it reduces costs by an estimated \$130/Mg of HAP controlled. The incremental electricity consumption to operate the refrigeration unit for the condensers is about 1.7 million kilowatt hours per year (kWh/yr), and the fuel energy to generate the electricity is about 16 billion Btu/yr. Total CO, NO<sub>x</sub>, and SO<sub>2</sub> emissions from combustion of the additional fuel to generate the electricity is 14 Mg/yr. There would be no wastewater, solid waste, or other non-air quality health or environmental impacts.

Regarding concerns expressed by the commenter on the system design requirements, such as the required size of the refrigeration units, the amount of piping and valves per condenser, and various installation cost elements, we recognize that these costs could be higher, depending on the site specific situation. In general, the costs would increase for the MACT floor condenser system as well as the regulatory alternative condenser system. The basis for selecting the 75 percent regulatory alternative is that the incremental cost between the MACT floor of 60 percent and the regulatory alternative is reasonable when considered in light of the non-air quality health and environmental impacts and energy requirements. In our original analysis based on condensation of toluene, the difference in total annual cost of the two model systems, one rendering an exit gas temperature of 36°F and one rendering an exit gas temperature of 50°F, was about the same, \$45,100 for the regulatory alternative, and \$43,417

for the MACT floor alternative; our costs did not specifically assume that the condenser system rendering an outlet gas temperature of 36°F would require a precooler; however, our conservative approach to estimating condenser costs based on a minimum surface area would account for the precooler costs, since the calculated surface area of the model condenser system was lower than the minimum size for which costs are available. Given all the cost elements, we note that the significant factor in annualized cost differences between the two alternatives is the recovery credit, which for the regulatory alternative was \$37,063 while the recovery credit for the MACT floor alternative was \$29,650. When subtracted from the total annual cost, the annualized cost for the regulatory alternative was \$8,038, while the annualized cost for the MACT floor alternative was \$13,766. Because cost effectiveness is expressed as total annualized cost divided by emissions reductions, recovery credit factors in not only by lowering the total cost of the option, but increases the denominator in the cost effectiveness term. The incremental difference between the two models, and also between the nationwide impacts that were essentially extrapolated from these two models, is negative. Further, the effect of the recovery credit essentially drives this decision, and is valid for our analysis. We assumed that each vessel would be equipped with a condenser and the condensed material could be returned directly to the vessel without further refinement; we do not agree that cross contamination would be a problem under this scenario; further, moisture generated from condensation of humid air does not appear to be a concern currently as indicated by the predominance of air systems and lack of nitrogen blanketing systems on storage tanks.

The commenters suggested that our cost analysis would have yielded different conclusions had we designed the model condensation systems for xylene, rather than toluene. We agree that cost effectiveness of implementing the model condensation systems largely depends on emission potential, which in turn varies according to the volatility of the HAP materials. Therefore, we decided to expand the commenter's issue and determine the HAP materials for which incremental costs for the 75 percent regulatory alternative are reasonable. We conducted an additional analysis on a model set of emission events consisting of identical processing steps, but processing a different HAP. For the analysis we evaluated the

following HAP: Toluene, xylene, cumene, phenol, and ethylene glycol. These compounds represent a range of vapor pressures for common HAP in the industry. We found that the incremental cost impacts of going above the MACT floor are unreasonable for HAP with vapor pressures less than that of cumene. Therefore, we revised the regulatory alternative and standard for stationary process vessels at existing sources to include a HAP vapor pressure threshold of 0.6 kPa at 25°C. Emissions of HAP with vapor pressures above the threshold must be controlled to the regulatory alternative level of 75 percent, whereas HAP with lower vapor pressures must be controlled to the MACT floor level of 60 percent. About 1 percent of the total HAP throughput in the industry consists of HAP with vapor pressures below the threshold; thus, we did not revise the incremental impacts for the regulatory alternative.

Note that we could not do a similar analysis for thermal incinerators because the efficiency of incinerators is generally assumed at 98 percent, and the analysis becomes dependent on assumptions made about incremental costs of capture efficiency. Instead, we assumed that the incremental analysis based on condenser control alone could also be used to justify the regulatory alternative.

We examined the feasibility of a regulatory alternative for portable process vessels with capacities greater than or equal to 250 gal at existing sources that would require the same 75 percent overall control as the regulatory alternative for stationary process vessels with capacities greater than or equal to 250 gal at existing sources. Using the same condenser cost analysis, we concluded that the total impacts of this option are unreasonable in light of the emissions reductions achieved. The incremental HAP reduction achieved by this beyond-the-floor option is approximately 400 Mg/yr, and the incremental cost was estimated to be approximately \$21,000/Mg of HAP controlled. In addition, electricity consumption to operate refrigeration units would increase from zero at the MACT floor to nearly 2.0 million kWh/yr. Fuel consumption (coal) to generate the electricity would increase by more than 19.0 billion Btu/yr; collectively, CO, NO<sub>x</sub>, and SO<sub>2</sub> emissions would increase by about 16.5 Mg/yr; and there would be no wastewater, solid waste, or other non-air quality health or environmental impacts.

We also evaluated a regulatory alternative for portable and stationary process vessels smaller than 250 gal at existing sources that would require the

same 75 percent overall control as the regulatory alternative for stationary process vessels larger than 250 gal at existing sources. We do not know the number of such vessels or their size distribution. Therefore, we conducted the analysis for a model 250 gal vessel with a tightly-fitting vented cover at baseline that is used in the production of a coating that is manufactured using toluene. As for the other analyses, we assumed the vessel is controlled using a condenser to meet the regulatory alternative, and the condenser can be served by the same refrigeration unit as for the stationary process vessels. We concluded that the total impacts of this alternative are unreasonable in light of the emission reduction achieved. The incremental HAP reduction achieved by this beyond-the-floor alternative is 0.07 Mg/yr, and the incremental cost is over \$25,000/Mg of HAP controlled. If the vessel at baseline does not have a tightly-fitting vented cover, the baseline emissions would be greater by an unknown amount, but the total costs would still be unreasonable. We also assumed that there would be no additional electricity or energy impacts because they are based on sized refrigeration systems, and addition of one or more vessels smaller than 250 gal would not require additional refrigeration capacity. Also, there would be no wastewater, solid waste, or other non-air quality health or environmental impacts.

*Comment:* One commenter requested flexibility in the control requirements for process vessels. The commenter noted that the proposed standard was tailored to the use of condensers on every process vessel, but it is not suited for the use of other control technologies or varying control levels among process vessels. The commenter also urged us to provide flexible averaging provisions that would allow different levels of control on different vessels while achieving overall control equivalent to that achieved by requiring the same control efficiency for each vessel. Furthermore, the commenter stated the proposed emissions averaging provisions are not useful because most vessels are not larger than 10,000 gallons; too few emission points are allowed in the average; it is too complex and burdensome; submitting a plan in the precompliance report 18 months before the compliance date is infeasible because facilities would not have determined how to comply by that date, and the requirement to obtain approval prior to making changes is cumbersome and restricts operations; it does not account for changes in the mix of

processes being run; and it should be available for use at anytime, not just when demonstrating initial compliance.

*Response:* The final rule includes an emissions averaging option for stationary process vessels at existing sources that may address the commenter's concerns. To demonstrate initial compliance with the emissions averaging option, an owner or operator must estimate three sets of emissions for each vessel in the averaging group. First, the owner or operator must determine the uncontrolled emissions. Procedures for estimating uncontrolled emissions are specified in § 63.1257(d)(2), except that for purging events the final subpart HHHHH specifies a procedure for estimating the specific partial pressure of each HAP rather than allowing an assumption of saturation or 25 percent of saturation. Second, the owner or operator must estimate emissions from each vessel in the averaging group as if it were controlled in accordance with the percent reduction standard (*i.e.*, 60 percent or 75 percent reductions depending on the vapor pressure of the HAP in the emission stream). Third, the owner or operator must determine the actual emissions, which may range from uncontrolled for some vessels to control levels significantly higher than those determined in the previous step. The owner or operator must include these data and calculations in the precompliance report along with rationale for why the sum of the actual emissions on a quarterly basis will be less than the sum of the emissions if 60 percent or 75 percent, as applicable, were achieved for each individual vessel. To demonstrate ongoing compliance, the owner or operator must track the number of batches produced, calculate the quarterly actual emissions and emissions under the regular percent reduction standard for each vessel, and sum the two sets of quarterly emissions. Compliance is demonstrated if the sum of the actual emissions is lower than the sum of emissions under the regular percent reduction standard.

#### D. Standards for Storage Tanks

*Comment:* One commenter stated the MACT floor for storage tanks was determined incorrectly because we did not consider the actual performance of scrubber controls. The commenter also stated that the standard must be revised because tank capacity and HAP partial pressure cutoffs are illegal.

*Response:* None of the storage tanks containing organic HAP at the surveyed facilities was controlled with a scrubber. Therefore, the MACT floors for both existing and new sources are based on the actual reported performance of

sources' controls and our consideration of whether sources are reducing emissions by other means besides controls.

Regarding tank capacity cutoffs, we considered two subcategories of storage tanks in our floor analysis: tanks with capacities less than 10,000 gal and storage tanks with capacities greater than or equal to 10,000 gal. We did not specifically request information for storage tanks with capacities less than 10,000 gal, and we did not receive any information about such smaller tanks. However, since the costs relative to the amount of control achieved tend to increase as the size of the storage tank decreases, we consider it highly unlikely that the industry is reducing emissions from tanks with capacities smaller than 10,000 gal when they are not reducing emissions from tanks with larger capacities. Thus, we concluded that the existing source and new source MACT floors for storage tanks with capacities less than 10,000 are no emissions reduction. We did not set beyond-the-floor standards for these smaller tanks because the total impacts to reduce emissions from storage tanks smaller than 20,000 gal were found to be unreasonable, and impacts for smaller tanks would be even less favorable.

With respect to storage tanks with capacities greater than or equal to 10,000 gal, fewer than 6 percent of the storage tanks in our database use controls or reduce emissions by any other means. Thus, we concluded that the existing source MACT floor for all storage tanks with capacities greater than or equal to 10,000 gal is no emissions reduction.

In setting the MACT floor for existing sources, we considered whether some facilities may implement emission reduction measures to reduce emissions from storage tanks, instead of using control technologies. Internal and external floating roofs are used to minimize emissions in many other industries, and vapor balancing when filling the tank is another common technique in other industries. However, we did not obtain any information in the responses to the ICR or from other resources that such measures are being used in the miscellaneous coating manufacturing industry. Another factor that can affect the emissions level is the color of the tank, but we have no information to suggest that any facilities are not already using the most favorable color scheme. Also, we have no information that any other measures are being used to reduce emissions. Therefore, because we lack information indicating that a sufficient number of storage tanks employ measures other

than control technologies to reduce HAP emissions to set a floor, we were unable to set a MACT floor based on emission reduction measures.

We examined two regulatory alternatives for storage tanks with capacities greater than or equal to 10,000 gal at existing sources, both of which would require the use of either a floating roof or venting to a control device that reduces emissions by 90 percent. The first alternative would apply to storage tanks with capacities greater than or equal to 20,000 gal that store material with a HAP partial pressure greater than or equal to 1.9 psia. The second alternative uses a size cutoff of 10,000 gal with the same HAP partial pressure cutoff. We set the standard at the level of the first regulatory alternative because, considering the level of emission reduction achieved, the total impacts of that alternative were determined to be reasonable, whereas the total impacts of the second alternative were determined to be unreasonable. Specifically, the first regulatory alternative reduces HAP emissions by 2.5 Mg/yr at an incremental cost of \$2,700 to \$4,900 per Mg of HAP controlled, depending on the characteristics of the tank. In addition, because this option can be achieved by using floating roofs, there are no non-air quality health or environmental impacts, including wastewater impacts and solid waste impacts, and no energy impacts. The second alternative reduces emissions by 7.5 Mg/yr at an incremental cost of at least \$17,000 per Mg of HAP controlled, depending on the characteristics of the tank. The second regulatory alternative also has no non-air quality health or environmental impacts, including wastewater impacts and solid waste impacts, and no energy impacts for tanks that can be controlled with floating roofs. However, horizontal tanks (all of which in our database are smaller than 20,000 gal) must be controlled with an add-on control device such as a condenser. The incremental electricity consumption to run the condensers and fuel energy consumption to generate electricity would be 31,000 kwh/yr and 300 million Btu/yr, respectively. Total CO, NO<sub>x</sub>, and SO<sub>2</sub> emissions from combustion of additional fuel to generate the electricity would be about 0.26 Mg/yr. There would be no wastewater, solid waste, or other non-air quality health and environmental impacts.

The new source MACT floor for storage tanks is based on the control achieved by the best-performing source. The proposed floor consisted of 90 percent control of emissions from

storage tanks with capacities greater than or equal to 20,000 gal that store material with a HAP partial pressure greater than or equal to 1.5 psia and 90 percent control of emissions from storage tanks with capacities greater than or equal to 25,000 gal that store material with a HAP partial pressure greater than or equal to 0.1 psia. However, another facility reduces emissions by 80 percent from storage tanks with capacities of 10,000 gal that store material with a HAP vapor pressure of 0.02 psia. Upon further consideration since proposal, we determined that we cannot exclude these tanks from the floor analysis simply because the HAP vapor pressure is extremely low. Thus, the revised new source MACT floor for storage tanks consists of venting through a closed-vent system to a control device that reduces HAP emissions by at least 80 percent for storage tanks with a capacity greater than or equal to 10,000 gal that store material with a HAP partial pressure greater than or equal to 0.02 psia; the new source floor also consists of venting emissions through a closed-vent system to a control device that reduces HAP emissions by at least 90 percent for storage tanks with either capacities greater than or equal to 20,000 gal that store material with a HAP partial pressure greater than or equal to 0.1 psia or capacities greater than or equal to 25,000 gal that store material with a HAP partial pressure greater than or equal to 1.5 psia. Each of these new source standards reflects, or is equivalent to, the performance of the best-controlled source because the control levels for existing tanks increase with both increasing tank capacity and increasing HAP partial pressure.

The revised emission limits for storage tanks at new sources are based on the MACT floor because the MACT floor is more stringent than the second regulatory alternative for existing sources, which we determined to have unreasonable impacts.

#### *E. Standards for Wastewater*

*Comment:* Four commenters disagreed with our determination that the MACT floor for wastewater is HON-equivalent management and treatment procedures for wastewater that contains more than 4,000 ppmw of HAP listed in Table 9 to 40 CFR part 63, subpart G. One commenter stated that the floor should be recalculated to be based on the actual performance of the best sources, not simply set at the median concentration of controlled streams. According to one commenter, the floor should be no control because no add-on control is used by more than 6 percent

of all wastewater streams. One commenter indicated that we have obtained accurate information on 30 wastewater streams, and all of the data must be used in setting the floor, including data for streams that contain less than 1,000 ppmw of HAP and streams that contain only inorganic HAP. Further, the commenter stated that flow is needed as well as concentration to determine the best performers. Flow is needed to convert concentrations to mass loadings, and it, or total volume, has been used to determine applicability in past rules and is the determining factor in disposal costs. According to the commenter, our assumptions that coating manufacturing facilities are only small quantity generators, and only the concentration drives the cost of disposal, are incorrect. The commenter noted that our database includes wastewater streams that have higher flows than the five top-performing streams that we used to set the MACT floor, but these streams are not sent offsite for treatment because the cost to do so would be prohibitive. In addition, if our assumption that concentration drives the cost of disposal were true, the commenter stated that other streams in the database with concentrations similar to those of the top 5 streams would also be treated offsite, but they are actually treated onsite, sent to a publicly-owned treatment works (POTW), or sent offsite for solidification. Taking all of these factors into account, the commenter concluded the floor should be no control.

The commenter also provided additional comments in the event that we maintain that a floor exists and develop a standard, despite their objections noted above. First, the commenter stated that applicability thresholds must be based on the mean rather than the median because our hierarchy is to use the mean first when it results in a standard that matches real world technology. Second, if the standard still requires management and treatment procedures like those in the HON, the commenter requested an exemption from the steam stripping requirement for streams containing soluble HAP because steam stripping is inefficient and expensive for such streams; the commenter also stated that enclosed sewers are unnecessary for such streams. Third, two commenters requested that offsite RCRA waste treatment facilities not be required to certify that they will meet the requirements for wastewater in the final rule because such facilities are already stringently controlled. One commenter was concerned that RCRA facilities may

decline to accept wastewater if they are unnecessarily burdened with compliance requirements under the final rule. The commenter noted that a similar change was made recently to the NESHAP for Publicly Owned Treatment Works (POTW) in response to litigation.

*Response:* The miscellaneous coating manufacturing database contains ten streams from nine facilities. The 30 streams cited by one commenter was a preliminary draft value that was subsequently changed because it was incorrect.

After consideration of the comments, we decided to make two changes to the MACT floor analysis. First, to simplify the analysis, we have focused on only the actual management and treatment techniques used for the top performing five streams rather than calling them HON-equivalent. All five of these streams are collected and shipped offsite for destruction by combustion at a RCRA hazardous waste treatment facility. Second, we have decided that specifying only a concentration cutoff for determining which streams are subject to control is insufficient. Specifying only the concentration means even very small streams would be subject to control as long as the concentration of HAP listed on Table 9 of the HON (*i.e.*, partially soluble and soluble HAP in the final rule) is greater than or equal to 4,000 ppmw, but this is inconsistent with the statutory requirement to base the floor on the average of the top five streams. We considered specifying either load or flow rate in addition to the concentration, and we decided that load is the best choice. For the top five streams, the load tracks better with the concentration (*i.e.*, ranking the controlled streams by increasing load is the same as ranking by increasing concentration).

Of the top five streams, the median stream has a HAP concentration of 4,000 ppmw and a HAP load of 750 lb/yr. We continue to use the median rather than the mean because the median better represents the central tendency of the data. The top five streams (as well as the other five streams in the database) are skewed towards low concentrations; three of the five have relatively similar low concentrations, but the other two streams have concentrations ten or more times higher. A mean would be closer to the midpoint of the range, but it would not represent the bulk of the data. Therefore, the revised existing source MACT floor for wastewater consists of treatment as a hazardous waste for all streams with partially soluble and soluble HAP at a concentration greater than or equal to

4,000 ppmw and a load greater than or equal to 750 lb/yr. We estimate that a standard based on the MACT floor will reduce HAP emissions by 12.9 Mg/yr (14.2 tpy) at a cost of \$306,000 per year.

The revised new source MACT floor is based on the requirements for the best performing stream, which is a stream that contains 1,600 ppmw and 12 lb/yr of partially soluble and soluble HAP. Since this load is negligible, the new source MACT floor consists of treatment as a hazardous waste for wastewater streams that contain partially soluble and soluble HAP at a concentration greater than or equal to 1,600 ppmw at any load.

In setting the MACT floor, we considered whether some facilities may implement emission reduction measures other than control technologies to reduce HAP emissions from wastewater. We requested information on emission reduction measures in our CAA section 114 information collection request. Several facilities reported that they have implemented changes in the type or quantity of cleaning solution used, or in the method of cleaning. However, we do not know how effective these changes were in reducing HAP emissions, and we have no information to conclude that similar measures could be implemented by the facilities that reported HAP in their wastewater. Further, some HAP in the wastewater is HAP that is used in coatings products, and this HAP cannot be reduced without impacting the coating products produced. Therefore, we were unable to set a MACT floor based on emission reduction measures other than treatment.

We examined one regulatory alternative beyond the floor for existing sources that would require treatment as a hazardous waste for wastewater containing partially soluble and soluble HAP at a concentration greater than or equal to 1,000 ppmw and a load greater than or equal to 100 lb/yr. We concluded that the total impacts of this alternative are unreasonable because the incremental cost would be about \$280,000/Mg; it would increase electricity consumption by 640 kwh/yr; increase fuel consumption by 182 million Btu/yr; and increase CO, NO<sub>x</sub>, and SO<sub>2</sub> emissions by 0.02 Mg/yr. There would be no wastewater or solid waste impacts. Therefore, the standard for wastewater in the final rule is based on the revised MACT floor.

In addition, analyses for the HON and other projects concluded that enhanced biotreatment for soluble HAP compounds could achieve reductions as high as 99 percent. Because wastewater containing soluble HAP is generated at miscellaneous coating manufacturing

facilities, the final rule also allows onsite or offsite treatment in an enhanced biological treatment unit as an effectively equivalent alternative for soluble HAP. This alternative also may prove to be less costly than treatment as a hazardous waste for high-volume wastewater streams. Finally, we agree with the comment that Resource Conservation and Recovery Act (RCRA) facilities do not need to certify that they are meeting the requirements of subpart HHHHH; therefore, the final rule requires affected sources that ship their wastewater to an offsite facility for treatment as a hazardous waste to note this fact along with the name of the facility to which the wastewater is shipped in their notification of compliance status report.

#### F. Standards for Equipment Leaks

*Comment:* One commenter objected to our determination that the MACT floor is a LDAR program. According to the commenter, the actual performance of the best sources was not determined, and the selected program was simply borrowed from another rulemaking. If we make a determination of the floor based on the actual performance of relevant sources, the commenter noted that we must provide the public an opportunity to comment on it, or the rule would be unlawful, and arbitrary and capricious.

*Response:* The proposed floor was based on actual performance, but this concept takes a different form for equipment leak controls than for controls on other types of emission points because equipment leaks are essentially malfunctions, which are not predictable. However, a program of inspections and repair will ensure that any leaks that do occur are identified and fixed. We rate the performance of different LDAR programs based on the type of leak detection method, leak definition, and leak frequency. Specifically, performance is higher for instrument-based programs (*i.e.*, using portable organic vapor analyzers and EPA Method 21 of Appendix A to 40 CFR part 60) than sensory programs, lower leak definitions, and increased inspection frequency.

Based on the ICR responses from coating manufacturers, more than 12 percent of the facilities are implementing some type of LDAR program. One facility reported using an organic vapor analyzer (OVA), a 10,000 ppmv leak definition, and various monitoring frequencies for the different types of components; this program appears to be similar to the requirements of 40 CFR part 63, subpart TT (National Emission Standards for

Equipment Leaks—Control Level 1) and 40 CFR part 60, subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry). The others reported using a sensory-program, with most of them conducting inspections monthly. No facilities are capturing all of their equipment leak emissions and venting them through a closed-vent system to a control device. Thus, the MACT floor for existing sources was determined to be a sensory-based LDAR program with monthly inspections of all components. The new source MACT floor was determined to be an LDAR program based on 40 CFR part 63, subpart TT, consistent with the program implemented by the best-performing source.

*Comment:* One commenter objected to the standard being based on an LDAR program because it is a work practice standard rather than an emission limit. According to the commenter, the CAA requires us to set an emission limit rather than a work practice standard unless it is not feasible to prescribe or enforce an emission limit, and the commenter found no evidence or analysis in the record suggesting that it is not feasible to do so.

*Response:* We determined that an LDAR program is the most reasonable option for control of leaking components. Unlike other emission sources, leaking components are not deliberate emission sources but rather result from mechanical limitations associated with process piping and machinery. A well-managed facility follows a preventive maintenance program to minimize leaks but in all practicality cannot guarantee that no leaks will occur. Therefore, an emission standard for equipment leaks would be difficult to enforce or prescribe. In order to develop such an option, all processes and equipment containing process piping that could potentially leak would require complete capture and control. While the practice of enclosing components and venting to control is allowed as an alternative to LDAR, it is not practiced except in limited cases.

*Comment:* Many commenters stated the standard should be based on the MACT floor (*i.e.*, a sensory-based LDAR program). According to the commenters, we assumed leak frequencies and leak rates that are too high and costs that are too low; changing these assumptions will show the regulatory alternative (*i.e.*, an LDAR program requiring monitoring using Method 21) is not cost effective. According to the commenters, the SOCM average factors are not representative of the coatings manufacturing industry because

coatings processes generally use less volatile HAP, operate at lower temperatures and pressures, and all operation is in the liquid phase. The commenters considered coatings process conditions to be similar to those for gasoline distribution facilities, which they noted are required to comply with a sensory-based LDAR program. To support their position that leak frequencies and emission rates for coatings manufacturing processes are low, one commenter provided monitoring data for 13 facilities in the industry, including bagging sample data for a few of the pumps, valves, and connectors at one facility.

*Response:* We reviewed the leak data submitted by the commenter for 13 facilities, including three facilities from which data was recently collected by a fugitive emissions contractor. The three-facility study was well documented and conducted by the same contractor and using the same monitoring instrument that was calibrated on methane. Data from the remaining ten facilities was not as well documented and in some cases, the monitoring data appear to have been based on various instruments and that were calibrated on compounds other than methane. While these data may have been adequate for the individual facility purposes, we did not consider them in our analysis because we felt these data were not consistently obtained. The commenter also conducted a bagging study at one of the three plants for which screening data was collected. Using the results of the bagging study, the commenter calculated emission factors that are 0.00054 kilograms per hour (kg/hr)-source for valves, 0.0025 kg/hr-source for pumps, and 0.0000422 kg/hr-source for connectors. In developing the emission factors, the commenter essentially took an arithmetic average of the VOC emission rates for all components in the bagging study.

After reviewing the information, we decided to recalculate the emission factors according to the method documented in both American Petroleum Institute (API) and EPA publications (“Development of Fugitive Emission Factors for Petroleum Marketing Terminals,” Publication Number 4588, March 1993, Prepared by Radian Corporation for API; and “Protocol for Equipment Leak Emission Estimates,” EPA Publication EPA-453/R-95-017, November 1995). Using the bagging study and the corresponding screening data, we developed emission rate equations for pumps, valves, and connectors that relate the VOC emission rate (in kg/hr) to the average screening value (in ppmv) for each component. As

a second step, we used the data from the three-facility screening study to calculate average emission factors. Our analysis resulted in average emission factors of 0.000412 kg/hr-source for valves, 0.0042 kg/hr-source for pumps, and 0.000015 kg/hr-source for connectors. When we applied these emission factors to our model plant that was the basis for the cost analysis, we found that the uncontrolled HAP emissions are 0.70 tpy, versus the 4.03 tpy that was used in the original analysis. For comparison, if we had used the commenter’s calculated emission factors, we would have estimated 0.66 tpy HAP, a slightly lower value but well within the same order of magnitude as the factor we developed. In either case, we note that the revised estimate is only about 20 percent of the previous uncontrolled estimate.

We revised our impacts calculation by conservatively assuming that the relative reductions achieved by the MACT floor sensory LDAR program and the regulatory alternative (40 CFR part 63, subpart UU program) would be the same as assumed in prior analyses. For the model facilities, our previous analysis assumed a 29 percent reduction from uncontrolled baseline for the MACT floor and a 62 percent reduction for the subpart UU regulatory alternative. We multiplied the previously estimated nationwide reductions of implementing the MACT floor and the regulatory alternative by the ratio of model facility revised uncontrolled emission over the earlier estimate of uncontrolled emissions, or 0.7/4.03, to obtain revised emissions reductions. We assumed that the capital and total annual cost estimates would be unchanged from the previous analysis. The incremental cost effectiveness of going beyond the floor using this analysis was estimated to be \$15,800, and there are essentially no energy impacts or non-air quality health and environmental impacts associated with the regulatory alternative. Therefore, we cannot justify going beyond the floor in the final rule.

#### G. Standards for Transfer Operations

*Comment:* One commenter stated we must set a MACT floor for transfer operations at existing sources. According to the commenter, not setting a MACT floor because no State regulations apply to transfer operations is unlawful.

*Response:* In setting the MACT floor for existing sources, we considered the available information. We did not specifically request information for transfer operations in our CAA section 114 information request. Based on

follow-up conversations with representatives from five facilities with high solvent throughput rates that potentially are the most likely to control emissions from transfer operations, we determined that these facilities are not controlling their emissions from transfer operations. We also examined State regulations and determined that they apply only to throughput rates above those at coating manufacturing facilities, and they apply only to loading of tank trucks and railcars, which is less common than filling of smaller containers at coating manufacturing facilities. There are no other known means by which sources may be reducing emissions from transfer operations. Therefore, we concluded that the MACT floor for transfer operations at existing sources is no emissions reductions. Because we lack information indicating that any source is implementing or required to implement any measures to reduce HAP emissions from transfer operations, we concluded that the new source MACT floor also is no emissions reductions.

*Comment:* One commenter opposed the beyond-the-floor standard for existing and new sources. This commenter also claimed that we have not demonstrated that emissions from transfer operations warrant regulation because the facility on which impacts were estimated is not representative of the industry. The commenter contacted that facility and learned they primarily repack and distribute paint stripper, thinners, and spray gun cleaning solvent. According to the commenter, we generally overestimated emissions from transfer operations because we assumed that the industry transfers pure solvents or mixtures with high vapor pressures when in fact the industry transfers primarily materials with low vapor pressures, including waterborne products. Furthermore, the commenter stated that the regulatory alternative cannot be justified based on cost because the impacts are based on incorrect assumptions. For example, the commenter suggested the following changes: (1) Use the AP-42 saturation factor of 0.6 for submerged loading in dedicated vapor balance service instead of the assumption that displaced vapors are saturated; (2) use a tank truck filling rate of 25 gal/min instead of 150 gallons per minute (gal/min); (3) use characteristics of toluene (or better yet, xylene) instead of an arbitrary HAP with a molecular weight of 80 and a vapor pressure of 3.93 psia; (4) use a gas flow rate of 100 scfm instead of less than 4 scfm; (5) include capital costs for a refrigeration unit and auxiliary

equipment such as a precooler, ductwork, a fan, and pump for collected solvent; and (6) conduct the analysis over a range of coating throughput rates to bracket the actual operations in the industry. Taking these changes into account, the commenter estimated a cost of more than \$30,000/Mg for bulk loading tank trucks at rates between 1.8 million gal/yr and 7.3 million gal/yr. Another commenter stated that the standard should be no control.

*Response:* It appears that the first commenter thinks we used the results of the impacts analysis for one facility as the basis for our decision to set the existing and new source standards at a level beyond the floor. This is not correct. We actually conducted two analyses. The first was a sensitivity analysis, comparable to that suggested by the commenter, to determine the characteristics of emission streams for which the total impacts associated with a regulatory alternative that reduces emissions by 75 percent (the same level as the standard for stationary process vessels at existing sources) was reasonable. The second analysis involved estimating the impacts for existing facilities that met the characteristics from the first analysis.

Based on the results of our sensitivity analysis, we concluded that the total impacts are reasonable in light of the emissions reductions achieved if the coating products that are bulk loaded contain at least 3.0 million gal/yr of HAP with a partial pressure of at least 1.5 psia. The incremental HAP reduction achieved to meet the regulatory alternative for a model facility with these characteristics was estimated to be 10.8 Mg/yr, and the incremental cost was estimated to be \$3,200/Mg of HAP removed. These estimates assume the emissions are controlled using a condenser, and that the refrigeration unit used in the process vessels analysis can be replaced by one with a slightly larger capacity to accommodate all of the condensers. The incremental electricity consumption to operate the enlarged refrigeration unit is 3,200 kwh/yr, and the incremental fuel energy consumption to generate the electricity is 31 million Btu per year. Total CO, NO<sub>x</sub>, and SO<sub>2</sub> emissions from combustion of the additional fuel is 0.03 Mg/yr. The condensed HAP would be a hazardous waste. There would be no wastewater or other non-air quality health or environmental impacts.

At the maximum product loading volume cited by the commenter, we estimate the HAP or solvent throughput would be about 2.0 million gal/yr (*i.e.*, based on an average 1.75 lb HAP/gal coating); thus, none of the bulk loading

scenarios evaluated by the commenter would be subject to control under the standard. However, we provide the following discussion of the analysis in the event that a facility may expand production beyond the rates used in the commenter's analysis, or the quantity of HAP in their product is higher than the average value that we used.

In our analysis, we assumed the emission stream is saturated because emissions occur only as a result of vapor displacement, and the vent from the tank truck or rail car can be hard-piped to a control device. Because our analysis assumes that the control is a condenser with coolant supplied from the same refrigeration unit that we assumed would be used with condensers for process vessel emissions, we did not include the cost of a separate refrigeration unit in this analysis. We also included a smaller maintenance labor factor than would be used for a separate refrigerated condenser system. These assumptions mean the costs for overhead, taxes, and capital recovery are lower in our analysis than the commenter's.

Although we agree that adding costs for a precooler, ductwork, and a pump would be reasonable, we note that the overall cost of the auxiliary equipment in our analysis equals more than 50 percent of the cost for all auxiliary equipment in the commenter's analysis, even though we have a much smaller condenser. Furthermore, based on the commenter's data, it appears that we overestimated the cost of the condenser and waste solvent storage tank, which offsets our lack of costs for other auxiliary equipment.

We assumed a fill rate of 30 gal/min, which we consider to be consistent with the commenter's suggested rate of 25 gal/min. This rate also defines the gas flow into the condenser in our analysis because the system can be hard-piped, and there is no need to include supplemental dilution air at a rate 25 times the flow of the displaced volume. As the commenter noted, we assumed the coating product consists only of HAP solvent and solids. This was done to simplify the analysis. Also, products that contain little HAP or less volatile HAP are not likely to meet the thresholds that we set. Finally, we note that our analysis likely overestimates the actual costs because we assumed a waste disposal unit cost four times higher than the cost the commenter considers to be realistic. Therefore, we maintain that for transfer operations meeting the specified flow rate and partial pressure levels in the regulatory alternative, the incremental cost to

control emissions (relative to the floor of no emissions reduction) is reasonable.

In our second analysis, we searched the database for any facilities with HAP throughput and partial pressure that meet the cutoffs established for the regulatory alternative. We identified only one facility that potentially met the criteria. The estimated impacts for this facility are comparable to those for the model facility. Assuming the commenter is correct that most of the reported throughput at this facility is not associated with coating manufacturing, then the impacts of the standard may be lower than we estimated.

#### H. Pollution Prevention

*Comment:* One commenter stated that the exemption for equipment that contain less than 5 percent HAP is not a viable pollution prevention alternative. Several commenters consider the lack of a viable pollution prevention alternative to be a serious shortcoming in the rule as proposed, and they suggested several options for consideration. First, numerous commenters favored an option that allows manufacturers to take credit for reductions achieved by voluntarily choosing to manufacture lower HAP coatings or making other changes in production technology. Second, two commenters suggested exempting any compliance coating manufacturing from subpart HHHHH if the facility certifies that the coatings are manufactured to meet the surface coating rules. Third, one commenter suggested that we consider allowing delayed implementation of subpart HHHHH or provide an opt-out provision for facilities whose emissions drop below major source thresholds; this would minimize the impact of the "once-in, always-in" policy. Fourth, if none of the preceding options is acceptable, one commenter requested that the stringency of the standards be reduced because the industry has already achieved reductions as great as or greater than those expected by the proposed standards. Many commenters cited numerous changes in the industry over the past few years that have reduced emissions from coating manufacturing and have not been accounted for in setting the standards. For example, the shift in production to waterborne, UV cure, and high solids coatings, some of which has been driven by other regulatory requirements, contribute to reducing emissions from coating manufacturing as well as from coating application. One commenter estimated that the shift to manufacturing compliant coatings to

meet the surface coating MACT will reduce HAP content of coatings by 265,000 tpy, which also translates into the same reduction in HAP throughput for the manufacturing processes. Assuming 0.5 to 1.0 percent of the throughput is emitted during manufacturing means this reduction in throughput has already achieved a significant fraction of the expected reductions under subpart HHHHH. Other changes that have reduced emissions include the shift to using low vapor pressure solvents, making coatings exclusively in one vessel, and the production of smaller batch sizes with shorter lead times. Finally, the commenters noted that the industry has undertaken various voluntary efforts to reduce emissions including the paint industry's Coatings Care program, ACC's Responsible Care program, EPA's National Environmental Track program, and various State and local programs.

*Response:* We do not agree that facilities can demonstrate that any of the suggested alternatives are comparable to the specified emission standards. A percent reduction in the HAP content of products may not necessarily yield an equivalent percent reduction in emissions. A format such as a demonstration in reduction of HAP content at coatings manufacturers is not easily linked to overall HAP usage upon application.

#### I. Initial Compliance

*Comment:* One commenter has encountered difficulty in applying existing EPA stack sampling methods to determine condenser inlet concentrations of VOC and HAP for use in demonstrating the control efficiency of the condenser. The commenter manufactures adhesives and sealants in closed vessels to which solvent is introduced through closed piping systems, and solids are introduced via closed screw conveyors. Nitrogen is used to purge the conveyors and vessels, and the exhaust gas is vented to a chilled water condenser. The commenter noted that the vapor space in the process vessels is typically saturated with solvent vapor, which quickly overwhelms the sampling equipment. The commenter noted that the sampling equipment also artificially increases the emissions by drawing off vapor from the precondenser headspace that would not otherwise represent emissions. Furthermore, the commenter stated that the method and volume of nitrogen inerting dramatically affects the sampling effectiveness without actually altering total emissions. Therefore, the commenter supported the proposed option that would allow

compliance to be demonstrated by documenting operation at a suitable outlet temperature, but the commenter recommended modifying the option to consider the combined effect of covers and other vessel sealing devices as well as the efficiency of the condenser.

*Response:* Without additional details regarding operation of the equipment, characteristics of the gas stream(s), and modifications to the testing protocol that have already been attempted, we cannot provide constructive suggestions for modifying the sampling methods. However, we note that performance testing is only one of three options for demonstrating initial compliance for condensers. As the commenter indicated, a second option is to demonstrate that the condenser operates below a specified temperature, where the required level is based on the HAP partial pressure of the gas stream entering the condenser. The third option is to determine the percent reduction based on calculations of the uncontrolled and controlled emissions using the equations specified in § 63.1257(d).

#### J. Ongoing Compliance

*Comment:* According to one commenter, the monitoring provisions are arbitrary and capricious because they exempt sources with the greatest emissions (*i.e.*, those that fall outside of the MACT floor due to size have the loosest monitoring).

*Response:* We disagree with the commenter's assertions. The final rule, like the proposed rule, requires monitoring of all control devices. In some cases, to minimize the burden on small operations (*e.g.*, small control devices controlling process vessel vents), the final rule has different monitoring requirements for lower-emitting sources; however, these sources are not sources with the greatest HAP emissions as asserted by the commenter.

*Comment:* One commenter considered the proposed quality assurance/quality control (QA/QC) requirements for continuous parameter monitors to be unduly burdensome and stated that they contravene existing EPA standards and test methods. The commenter recommended that sources be required to develop preventive maintenance programs that are based on manufacturer's recommendations and actual operating/maintenance history of the instruments. Another commenter recommended adding a provision that allows sources to request approval, using the precompliance report, of alternatives to the QA/QC procedures

specified in § 63.8035 of the proposed rule.

*Response:* The final rule references the QA/QC requirements for continuous parameter monitoring systems (CPMS) in 40 CFR part 63, subpart SS. We deleted the proposed requirements for the same reasons we decided not to implement similar proposed QA/QC requirements in subpart SS (67 FR 46260, July 12, 2002). Specifically, we are currently developing performance specifications for CPMS to be followed by owners and operators of all sources subject to standards under 40 CFR part 63, which includes subpart HHHHH. Also, subpart SS currently specifies requirements for CPMS, and the requirements of subpart SS are referenced by the final rule. Even though they may not be as specific as those proposed, we decided it would be premature to promulgate performance specifications for subpart HHHHH when the performance specifications that would ultimately be promulgated for all 40 CFR part 63 may be significantly different. Until those performance specifications are ready, we consider the requirements in subpart SS to be the best choice because they are consistent with other rules applied to source categories containing similar control and monitoring equipment as in this source category. Further, references to these standard standards streamline compliance requirements for facilities with operations in numerous source categories. The procedures in subpart SS require monitoring equipment to be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately. These provisions are consistent with the commenters' suggestions.

#### K. Recordkeeping and Reporting

*Comment:* According to one commenter, the initial notification requirements are unnecessary because facilities in the miscellaneous coating source category have already submitted an initial notification under CAA section 112(j). Another commenter considers the notification to be unnecessary because it is already required under title V.

*Response:* The requirement to submit an initial notification is part of the General Provisions, which apply to all NESHAP. If the required information is already in the sources' title V permit applications, the requirement for sources to copy this information into their one-time initial notifications

should not be unduly burdensome. Having this information will help the regulatory authorities and the public better understand what is being regulated, especially since a source's initial notification may be submitted before its title V permit is issued or renewed.

*Comment:* Three commenters requested that the notification of compliance status report be due no earlier than 150 days or 180 days after the compliance date, as in other rules and the General Provisions. According to the commenters, facilities will need the full 3 years (if not longer) after the promulgation date to respond to actions taken by their customers and to evaluate their own compliance options, particularly to determine whether they can make changes such that they are no longer major sources.

*Response:* We accept the argument that some facilities may need the full 3 years after the effective date to bring controls online or to make product formulation changes to meet new customer requirements in response to the surface coating MACT rules. Therefore, we have decided to change the due date for the notification of compliance status report. In the final rule, the report is due no later than 150 days after the compliance date, as in many other rules.

#### L. Startup, Shutdown and Malfunction

*Comment:* According to one commenter, the startup, shutdown, and malfunction (SSM) provisions are unlawful because they allow sources to avoid enforcement actions merely by complying with their startup, shutdown, and malfunction plan (SSMP), but the CAA requires compliance continuously except for unavoidable deviations during SSM.

*Response:* We recently adopted final amendments to the General Provisions which address the concerns raised by the commenter (68 FR 32586, May 30, 2003). The final amendments clarify that § 63.6(e)(1)(i) establishes a general duty to minimize emissions. During a period of SSM, that general duty requires an owner or operator to reduce emissions to the greatest extent consistent with safety and good air pollution control practices. However, "during an SSM event, the general duty to minimize emissions does not require an owner or operator to achieve the levels required by the applicable MACT standard at other times, or to make further efforts to reduce emissions if such levels have been successfully achieved." As discussed in the preamble to the final amendments, we disagree with the commenter's legal

position that sources' compliance with SSMP requirements in lieu of applicable emission standards is permissible only where violations of emission limitations are unavoidable. As stated in the preamble to the final amendments to the General Provisions, "we believe that we have discretion to make reasonable distinctions concerning those particular activities to which the emission limitations in a MACT standard apply \* \* \*. However, we note that the general duty to minimize emissions is intended to be a legally enforceable duty which applies when the emission limitations in a MACT standard do not apply, thereby limiting exceedances of generally applicable emission limitations to those instances where they cannot be reasonably avoided." We further explained that the general duty to minimize emissions requires that owners or operators review their SSMP on an ongoing basis and make appropriate improvements to ensure that excess emissions are avoided.

*Comment:* Two commenters recommended that "startup" be defined as in the Amino and Phenolic Resins NESHAP (40 CFR part 63, subpart OOO). According to the commenters, the proposed definition more accurately defines a "new process."

*Response:* We clarified the definition of "startup" for the final rule. However, we did not use the definition from the Amino and Phenolic Resins final rule because we do not consider the language regarding flexible operation units and continuous processes to be appropriate for the miscellaneous coatings manufacturing source category. For the final rule, we removed the term "family of coatings," and we removed the list of actions that are not startup so that the definition focuses only on items that are startup. In addition, since it is possible that actions taken to bring equipment back online after it has been configured and used to produce a different product, we also decided to specify that the first time equipment is put into operation at the start of a campaign, even if the same product has been produced in the past, is startup if the actions taken differ from routine operation.

*Comment:* One commenter recommended that we clearly apply the SSMP to the emission control equipment rather than to individual process vessels on a batch to batch basis. According to the commenter, tracking the startup and shutdown of individual process vessels would require thousands of records, it would be nearly impossible to insure that all information is collected properly, and

the tracking adds no environmental value.

*Response:* Startup and shutdown do apply to control equipment because the definitions specify that they apply to "equipment required or used to comply with this subpart." Similarly, the definition of "malfunction" in § 63.2 specifies that it applies to control equipment. However, startup, shutdown, and malfunction also apply to the processing equipment. We disagree with the commenter's characterization that applying startup, shutdown, and malfunction to process vessels will result in the need to generate thousands of records because startup only applies to new sources, new equipment, and possibly the start of campaigns; and malfunctions, by definition, are infrequent failures of equipment. In addition, the definition of shutdown has been changed to specify that shutdown applies to the cessation of operation of process vessels only if the steps taken to cease operation differ from routine procedures for removing the vessel or equipment from service. This change also makes the definition of shutdown consistent with the revised definition of startup.

*Comment:* Several commenters recommended excluding periods of SSM from the definition of "deviation" and reporting deviations separately from reporting of SSM events. One commenter noted that periods of SSM are exempt from compliance under the rule as proposed and concluded that the proposed requirements are redundant and provide no useful information regarding compliance. Another commenter also noted that requirements in previous rules and the General Provisions differentiate between SSM events and deviations (or exceedances and excursions, in the terminology of previous rules). According to the commenter, changing the terminology and requirements for the final rule will at a minimum be confusing for facilities that also must comply with previous rules.

*Response:* We disagree with the commenter's contention that the proposed requirements are redundant. Section 63.6(e) of the General Provisions requires operation at all times (including during periods of SSM) in a manner consistent with safety and good air pollution control practices for minimizing emissions to the levels required by the relevant standards (*i.e.*, meet the standards or comply with the SSMP). Nothing in the General Provisions says the standards do not apply during periods of SSM, but compliance with the SSMP is allowed in the event the standard cannot

otherwise be met. Furthermore, although a deviation may occur for a day during which an SSM event also occurs, the recordkeeping and reporting requirements associated with the deviation differ from the recordkeeping and reporting requirements for the SSM event; thus, there is no redundancy. Information about all periods during which an emission limit, operating limit, or work practice standard is not met and the reasons for noncompliance is important. Thus, we have not changed the intent of the requirements for the final rule.

*Comment:* One commenter considers the proposed requirement for immediate reporting of actions taken that are inconsistent with the SSMP to be overly burdensome. According to the commenter, reporting these events with other SSM events on a semi-annual basis in the compliance report is sufficient, and the commenter noted that this approach has been used in 40 CFR part 63, subpart JJJ (Polymers and Resins) and subpart PPP (Polyether Polyols).

*Response:* We agree that immediate notifications are not necessary. The industries covered by this source category generally have extensive upset/SSM reporting requirements under the Comprehensive Environmental Response, Compensation, and Liability Act and state reporting requirements that should be adequate in supplying timely notification of events. Further, the final rule requires information regarding actions inconsistent with the SSMP to be submitted in semiannual compliance reports. For these reasons, and to maintain consistency with the HON and the Consolidated Air Rule (CAR), we have overridden the immediate SSM reporting required by §§ 63.6(e)(3)(iv) and 63.10(d)(5)(ii) of the General Provisions.

## V. Statutory and Executive Order Reviews

### A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the EPA must determine whether the regulatory action is "significant" and, therefore, subject to review by the Office of Management and Budget (OMB) and the requirements of the Executive Order. The Executive Order defines a "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 entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

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

Pursuant to the terms of Executive Order 12866, OMB has notified EPA that it considers this a "significant regulatory action" within the meaning of the Executive Order. The EPA has submitted this action to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

### B. Paperwork Reduction Act

The information collection requirements in the final rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The information requirements are not enforceable until OMB approves them. The ICR number is 2115.01.

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 owners or operators subject to NESHAP. These recordkeeping and reporting requirements are specifically authorized by section 112 of the CAA (42 U.S.C. 7412). All information submitted to the EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to Agency policies in 40 CFR part 2, subpart B.

The final NESHAP require maintenance inspections of the control devices but do not require any notifications or reports beyond those required by the NESHAP General Provisions (40 CFR part 63, subpart A). The recordkeeping requirements collect only the specific information needed to determine compliance.

The annual public reporting and recordkeeping burden for this collection of information (averaged over the first 3 years after the effective date of the final rule) is estimated to average 79 labor hours per year at an annual cost of \$3,500 for 129 respondents. These estimates include one-time submissions of notifications and precompliance reports, preparation of an SSMP with

semiannual reports for any event when the procedures in the plan were not followed, preparation of semiannual compliance reports, and recordkeeping. Total annualized capital/startup costs associated with the monitoring requirements for the 3-year period of the ICR are estimated at \$10,000/yr. Average operation and maintenance costs associated with the monitoring requirements for the 3-year period are estimated at \$34,000/yr.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purpose of collecting, validating, and verifying information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel 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 number for EPA's regulations in 40 CFR are in 40 CFR part 9. When the ICR is approved by OMB, the Agency will publish a technical amendment to 40 CFR part 9 in the **Federal Register** to display the OMB control number for the approved information collection requirements contained in the final rule.

### C. Regulatory Flexibility Act

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with the final rule. The EPA has also determined that the final rule will not have a significant economic impact on a substantial number of small entities. For purposes of assessing the impact of today's rule on small entities, small entity is defined as: (1) A small business having up to 500 employees, (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000, and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, EPA has concluded that this action will not have a significant economic impact on a substantial number of small entities.

Our economic analysis identified as small businesses 32 of the 58 companies owning affected coating manufacturing facilities. This constitutes 55 percent of the affected businesses. Although small businesses represent 55 percent of the companies within the source category, they are expected to incur 24 percent of the total industry compliance costs of \$16 million. According to EPA's economic assessment, there are two small firms with compliance costs equal to or greater than 3 percent of their sales. In addition, there are five small firms with cost-to-sales ratios between 1 and 3 percent.

An economic impact analysis was performed to estimate the changes in product price and production quantities for the firms affected by subpart HHHHH. The analysis shows that of the 70 facilities owned by affected small firms, one is expected to shut down after implementation of the NESHAP.

The baseline economic condition of the facility predicted to close affects the closure estimate provided by the economic model. Facilities that are already experiencing adverse economic conditions will be more severely impacted than those that are not, and the facility predicted to close currently has low profitability levels.

Although the NESHAP will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to limit the impact of the final rule on small entities. We have worked closely with the National Paint and Coatings Association, the National Association of Printing Ink Manufacturers, and the Adhesives and Sealants Council. These trade organizations, which represent the majority of facilities covered by subpart HHHHH, have represented their members at stakeholder meetings throughout the standards development process. We worked with the coating manufacturers to minimize the overlap of MACT standards and provide several alternative ways to comply with the standards to allow as much flexibility as possible. The multi-process vessel alternative emission limit and the pollution prevention option help those small entities that have been proactive in reducing their HAP emissions and usage, respectively.

### D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written

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

The EPA has determined that the 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 one year. The maximum total annual costs of the final rule for any year is estimated to be less than \$16 million. Thus, the final rule is not subject to the requirements of sections 202 and 205 of the UMRA.

In addition, the NESHAP 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, the final rule is not subject to the requirements of section 203 of the UMRA.

### E. Executive Order 13132: Federalism

Executive Order 13132 (64 FR 43255, August 10, 1999) requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that

have federalism implications.” “Policies that have federalism implications” 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.”

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

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

Executive Order 13175 (65 FR 67249, November 9, 2000) requires EPA to develop an accountable process to ensure “meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.” The final rule does not have tribal implications. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes. No tribal governments own or operate miscellaneous coating operations. Thus, Executive Order 13175 does not apply to the final rule.

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

Executive Order 13045 (62 FR 1985, April 23, 1997) applies to any rule that: (1) is determined to be “economically significant” as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, EPA must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

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

analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. The final rule is not subject to the Executive Order because it is based on technology performance and not health or safety risks.

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

The final rule is not a “significant energy action” as defined in Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Approximately 3.0 million kwh/yr of electricity will be needed to operate fans and pumps for control systems. Generating this amount of electricity will consume about 1,000 tpy of coal. If owners and operators elect to use combustion-based control devices, a small amount of natural gas will also be used.

*I. National Technology Transfer Advancement Act*

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

The final rule involves technical standards. The final rule uses EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2G, 2F, 3, 3A, 3B, 4, 18, 25, 25A, 26, 26A, 305, 320, 624, 625, 1624, 1625, 1666, 1671, 8260, and 8270. Consistent with the NTTAA, the EPA conducted searches to identify voluntary consensus standards in addition to these EPA methods. The search and review results have been documented and placed in the docket for the NESHAP (Docket ID No. OAR–03–0178). The search for emissions monitoring procedures for measuring emissions of the HAP or surrogates subject to emission limitations in these NESHAP identified 19 voluntary consensus standards that appeared to have possible use in lieu of EPA standard reference methods. However,

after reviewing the available standards, EPA determined that 13 of the candidate consensus standards would not be practical due to lack of equivalency, documentation, and validation data. The 13 standards are: ASME C00031 or Performance Test Code 19–10–1981, ASTM D3154–91 (1995), ASTM D3464–96, ASTM D3796–90 (1998), ASTM D5835–95, ASTM D6060–96, ASTM E337–84 (Reapproved 1996), CAN/CSA Z2232.2–M–86, European Norm (EN) 12619 (1999), EN 1911–1,2,3 (1998), ISO 9096:1992, ISO 10396:1993, and ISO 10780:1994. Of the six remaining candidate consensus standards, the following five are under development or under EPA review: ASME/BSR MFC 12M, ASME/BSR MFC 13m, ASTM D5790–95 (1995), ISO/DIS 12039, and ISO/FDIS 14965. The EPA plans to follow, review, and consider adopting these candidate consensus standards after their development and further review by EPA is completed.

One consensus standard, ASTM D6420–99, Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (GC/MS), is appropriate in the cases described below for inclusion in these NESHAP in addition to the currently available EPA Method 18 codified at 40 CFR part 60, appendix A for measurement of organic compounds. Therefore, the standard ASTM D6420–99 is cited in the final rule.

Similar to EPA’s performance based Method 18, ASTM D6420–99 is also a performance based method for measurement of gaseous organic compounds. However, ASTM D6420–99 was written to support the specific use of highly portable and automated GC/MS. While offering advantages over the traditional Method 18, the ASTM method does allow some less stringent criteria for accepting GC/MS results than required by Method 18. Therefore, ASTM D6420–99 (Docket ID No. OAR–2003–0178) is a suitable alternative to Method 18 only where the target compound(s) are those listed in section 1.1 of ASTM D6420–99; and the target concentration is between 150 ppb(v) and 100 ppm(v).

For target compound(s) not listed in Table 1.1 of ASTM D6420–99, but potentially detected by mass spectrometry, the regulation specifies that the additional system continuing calibration check after each run, as detailed in Section 10.5.3 of the ASTM method, must be followed, met, documented, and submitted with the data report even if there is no moisture condenser used or the compound is not considered water soluble. For target

compound(s) not listed in Section 1.1 of ASTM D6420–99, and not amenable to detection by mass spectrometry, ASTM D6420–99 does not apply.

As a result, EPA cites ASTM D6420–99 in subpart HHHHH of part 63. The EPA also cites Method 18 as a gas chromatography (GC) option in addition to ASTM D6420–99. This will allow the continued use of GC configurations other than GC/MS.

Some EPA testing methods and performance standards are specified in § 63.8000(d)(1) of subpart HHHHH. Most of the standards have been used by States and industry for more than 10 years. Nevertheless, under § 63.7(f), the final rule also allows any State or source to apply to EPA for permission to use an alternative method in place of any of the EPA testing methods or performance standards listed in the NESHAP.

#### *J. Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing the final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. The final rule 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, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: August 29, 2003.

**Marianne Lamont Horinko**,  
*Acting Administrator.*

■ For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of the 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. Part 63 is amended by adding a new subpart HHHHH to read as follows:

#### **Subpart HHHHH—National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing**

Sec.

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#### **Subpart HHHHH—National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing**

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

##### **§ 63.7980 What is the purpose of this subpart?**

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for miscellaneous coating manufacturing. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limits, operating limits, and work practice standards.

##### **§ 63.7985 Am I subject to the requirements in this subpart?**

(a) You are subject to the requirements in this subpart if you own or operate miscellaneous coating manufacturing operations, as defined in paragraph (b) of this section, that meet the conditions specified in paragraphs (a)(1) through (4) of this section.

(1) Are located at or are part of a major source of hazardous air pollutants (HAP) emissions, as defined in section 112(a) of the Clean Air Act (CAA).  
(2) Manufacture coatings as defined in § 63.8105.

(3) Process, use, or produce HAP.  
(4) Are not part of an affected source under another subpart of this part 63.

(b) Miscellaneous coating manufacturing operations include the facilitywide collection of equipment described in paragraphs (b)(1) through (4) of this section that is used to manufacture coatings as defined in § 63.8105. Miscellaneous coating manufacturing operations also include cleaning operations.

- (1) Process vessels.  
(2) Storage tanks for feedstocks and products.  
(3) Components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems.  
(4) Wastewater tanks and transfer racks.  
(c) If the predominant use of a transfer rack loading arm or storage tank

(including storage tanks in series) is associated with miscellaneous coating manufacturing, and the loading arm or storage tank is not part of an affected source under a subpart of this part 63, then you must assign the loading arm or storage tank to the miscellaneous coating manufacturing operations. If the predominant use cannot be determined, and the loading arm or storage tank is not part of an affected source under a subpart of this part 63, then you must assign the loading arm or storage tank to the miscellaneous coating manufacturing operations. If the use varies from year to year, then you must base the determination on the utilization that occurred during the year preceding December 11, 2003 or, if the loading arm or storage tank was not in operation during that year, you must base the use on the expected use for the first 5-year period after startup. You must include the determination in the notification of compliance status report specified in § 63.8075(d). You must redetermine the predominant use at least once every 5 years after the compliance date.

(d) The requirements for miscellaneous coatings manufacturing sources in this subpart do not apply to operations described in paragraphs (d)(1) through (4) of this section.

(1) Research and development facilities, as defined in section 112(c)(7) of the CAA.

(2) The affiliated operations located at an affected source under subparts GG (National Emission Standards for Aerospace Manufacturing and Rework Facilities), KK (National Emission Standards for the Printing and Publishing Industry), JJJJ (NESHAP: Paper and Other Web Coating), future MMMM (National Emission Standards for Miscellaneous Metal Parts and Products Surface Coating Operations) and SSSS (NESHAP: Surface Coating of Metal Coil) of 40 CFR part 63. Affiliated operations include, but are not limited to, mixing or dissolving of coating ingredients; coating mixing for viscosity adjustment, color tint or additive blending, or pH adjustment; cleaning of coating lines and coating line parts; handling and storage of coatings and solvent; and conveyance and treatment of wastewater.

(3) Ancillary equipment such as boilers and incinerators (only those not used to comply with the emission limits in Tables 1 through 5 to this subpart), chillers and refrigeration systems, and other equipment that is not directly involved in the manufacturing of a coating (*i.e.*, it operates as a closed system, and materials are not combined

with materials used to manufacture the coating).

(4) Quality assurance/quality control laboratories.

**§ 63.7990 What parts of my plant does this subpart cover?**

(a) This subpart applies to each miscellaneous coating manufacturing affected source as defined in § 63.7985(a).

(b) The miscellaneous coating manufacturing affected source is the miscellaneous coating manufacturing operations as defined in § 63.7985(b).

(c) An affected source is a new affected source if you commenced construction or reconstruction after April 4, 2002, and you met the applicability criteria at the time you commenced construction or reconstruction.

**Compliance Dates**

**§ 63.7995 When do I have to comply with this subpart?**

(a) If you have a new affected source, you must comply with this subpart according to the requirements in paragraphs (a)(1) and (2) of this section.

(1) If you start up your new affected source before December 11, 2003, then you must comply with the requirements for new sources in this subpart no later than December 11, 2003.

(2) If you start up your new affected source after December 11, 2003, then you must comply with the requirements for new sources in this subpart upon startup of your affected source.

(b) If you have an existing affected source on December 11, 2003, then you must comply with the requirements for existing sources in this subpart no later than December 11, 2005.

(c) If you add equipment to your existing affected source after December 11, 2003 you must comply with the requirements for existing sources in this subpart upon startup of the added equipment.

(d) You must meet the notification requirements in § 63.8070 according to the schedule in § 63.8070 and in 40 CFR part 63, subpart A. Some of the notifications must be submitted before you are required to comply with the emission limits, operating limits, and work practice standards in this subpart.

**Emission Limits, Work Practice Standards, and Compliance Requirements**

**§ 63.8000 What are my general requirements for complying with this subpart?**

(a) You must be in compliance with the emission limits and work practice standards in Tables 1 through 5 to this

subpart at all times, except during periods of startup, shutdown, and malfunction. You must meet the requirements specified in paragraphs (b) and (c) of this section. You must meet the requirements specified in §§ 63.8005 through 63.8025 (or the alternative means of compliance in § 63.8050), except as specified in paragraph (d) of this section. You must meet the notification, reporting, and recordkeeping requirements specified in §§ 63.8070, 63.8075, and 63.8080.

(b) *General requirements.* (1) If an emission stream contains halogen atoms, you must determine whether it meets the definition of a halogenated stream by calculating the concentration of each organic compound that contains halogen atoms using the procedures specified in § 63.115(d)(2)(v), multiplying each concentration by the number of halogen atoms in the organic compound, and summing the resulting halogen atom concentrations for all of the organic compounds in the emission stream. Alternatively, you may elect to designate the emission stream as halogenated.

(2) Opening of a safety device, as defined in § 63.8105, is allowed at any time conditions require it to avoid unsafe conditions.

(c) Compliance requirements for closed vent systems and control devices. If you use a control device to comply with an emission limit in Table 1, 2, or 5 to this subpart, you must comply with the requirements in subpart SS of 40 CFR part 63 as specified in paragraphs (c)(1) through (3) of this section, except as specified in paragraph (d) of this section.

(1) If you reduce organic HAP emissions by venting emissions through a closed-vent system to any combination of control devices (except a flare), you must meet the requirements of § 63.982(c) and the requirements referenced therein.

(2) If you reduce organic HAP emissions by venting emissions through a closed-vent system to a flare, you must meet the requirements of § 63.982(b) and the requirements referenced therein. You may not use a flare to control halogenated vent streams or hydrogen halide and halogen HAP emissions.

(3) If you use a halogen reduction device to reduce hydrogen halide and halogen HAP emissions that are generated by combusting halogenated vent streams, you must meet the requirements of § 63.994 and the requirements referenced therein. If you use a halogen reduction device before a combustion device, you must determine the halogen atom emission rate prior to

the combustion device according to the procedures in § 63.115(d)(2)(v).

(d) *Exceptions to the requirements specified in other subparts of this part 63.* (1) *Requirements for performance tests.* The requirements specified in paragraphs (d)(1)(i) through (v) of this section apply instead of or in addition to the requirements for performance testing of control devices as specified in subpart SS of 40 CFR part 63.

(i) Conduct gas molecular weight analysis using Method 3, 3A, or 3B in appendix A to 40 CFR part 60.

(ii) Measure moisture content of the stack gas using Method 4 in appendix A to 40 CFR part 60.

(iii) As an alternative to using Method 18, Method 25/25A, or Method 26/26A of 40 CFR part 60, appendix A to comply with any of the emission limits specified in Tables 1 through 7 to this subpart, you may use Method 320 of 40 CFR part 60, appendix A. When using Method 320, you must follow the analyte spiking procedures of section 13 of Method 320, unless you demonstrate that the complete spiking procedure has been conducted at a similar source.

(iv) Section 63.997(c)(1) does not apply. For the purposes of this subpart, results of all initial compliance demonstrations must be included in the notification of compliance status report, which is due 150 days after the compliance date, as specified in § 63.8075(d)(1).

(v) The option in § 63.997(e)(2)(iv)(C) to demonstrate compliance with a percent reduction emission limit by measuring total organic carbon (TOC) is not allowed.

(vi) If you do not have a closed-vent system as defined in § 63.981, you must determine capture efficiency using Method 204 of appendix M to 40 CFR part 51 for all stationary process vessels subject to requirements of Table 1 to this subpart.

(2) *Design evaluation.* To determine the percent reduction of a small control device, you may elect to conduct a design evaluation as specified in § 63.1257(a)(1) instead of a performance test as specified in subpart SS of 40 CFR part 63. You must establish the value(s) and basis for the operating limits as part of the design evaluation.

(3) *Periodic verification.* For a control device with total inlet HAP emissions less than 1 ton per year (tpy), you must establish an operating limit(s) for a parameter(s) that you will measure and record at least once per averaging period (*i.e.*, daily or block) to verify that the control device is operating properly. You may elect to measure the same parameter(s) that is required for control devices that control inlet HAP

emissions equal to or greater than 1 tpy. If the parameter will not be measured continuously, you must request approval of your proposed procedure in the precompliance report. You must identify the operating limit(s) and the measurement frequency, and you must provide rationale to support how these measurements demonstrate the control device is operating properly.

(4) *Continuous emissions monitoring systems.* Each continuous emissions monitoring system (CEMS) must be installed, operated, and maintained according to the requirements in § 63.8 and paragraphs (d)(4)(i) through (iv) of this section.

(i) Each CEMS must be installed, operated, and maintained according to the applicable Performance Specification of 40 CFR part 60, appendix B, and according to paragraph (d)(4)(ii) of this section, except as specified in paragraph (d)(4)(i)(A) of this section. For any CEMS meeting Performance Specification 8, you must also comply with appendix F, procedure 1 of 40 CFR part 60.

(A) If you wish to use a CEMS other than a Fourier Transform Infrared Spectroscopy (FTIR) meeting the requirements of Performance Specification 15 to measure hydrogen halide and halogen HAP before we promulgate a Performance Specification for such CEMS, you must prepare a monitoring plan and submit it for approval in accordance with the procedures specified in § 63.8.

(B) [Reserved]

(ii) You must determine the calibration gases and reporting units for TOC CEMS in accordance with paragraph (d)(4)(ii)(A), (B), or (C) of this section.

(A) For CEMS meeting Performance Specification 9 or 15 requirements, determine the target analyte(s) for calibration using either process knowledge of the control device inlet stream or the screening procedures of Method 18 on the control device inlet stream.

(B) For CEMS meeting Performance Specification 8 used to monitor performance of a combustion device, calibrate the instrument on the predominant organic HAP and report the results as carbon ( $C_1$ ), and use Method 25A or any approved alternative as the reference method for the relative accuracy tests.

(C) For CEMS meeting Performance Specification 8 used to monitor performance of a noncombustion device, determine the predominant organic HAP using either process knowledge or the screening procedures of Method 18 on the control device inlet

stream, calibrate the monitor on the predominant organic HAP, and report the results as  $C_1$ . Use Method 18, ASTM D6420-99, or any approved alternative as the reference method for the relative accuracy tests, and report the results as  $C_1$ .

(iii) You must conduct a performance evaluation of each CEMS according to the requirements in 40 CFR 63.8 and according to the applicable Performance Specification of 40 CFR part 60, appendix B, except that the schedule in § 63.8(e)(4) does not apply, and the results of the performance evaluation must be included in the notification of compliance status report.

(iv) The CEMS data must be reduced to operating day or operating block averages computed using valid data consistent with the data availability requirements specified in § 63.999(c)(6)(i)(B) through (D), except monitoring data also are sufficient to constitute a valid hour of data if measured values are available for at least two of the 15-minute periods during an hour when calibration, quality assurance, or maintenance activities are being performed. An operating block is a period of time from the beginning to end of batch operations in the manufacturing of a coating. Operating block averages may be used only for process vessel data.

(5) *Continuous parameter monitoring.* The provisions in paragraphs (d)(5)(i) through (iii) of this section apply in addition to the requirements for continuous parameter monitoring system (CPMS) in subpart SS of 40 CFR part 63.

(i) You must record the results of each calibration check and all maintenance performed on the CPMS as specified in § 63.998(c)(1)(i)(A).

(ii) When subpart SS of 40 CFR part 63 uses the term a range or operating range of a monitored parameter, it means an operating limit for a monitored parameter for the purposes of this subpart.

(iii) As an alternative to measuring pH as specified in § 63.994(c)(1)(i), you may elect to continuously monitor the caustic strength of the scrubber effluent.

(6) *Startup, shutdown, and malfunction.* Sections 63.998(b)(2)(iii) and (b)(6)(i)(A), which apply to the exclusion of monitoring data collected during periods of startup, shutdown, and malfunction (SSM) from daily averages, do not apply for the purposes of this subpart.

(7) *Reporting.* (i) When §§ 63.8005 through 63.8025 reference other subparts in this part 63 that use the term periodic report, it means compliance report for the purposes of this subpart.

(ii) When there are conflicts between this subpart and referenced subparts for the due dates of reports required by this subpart, reports must be submitted according to the due dates presented in this subpart.

(iii) Excused excursions, as defined in subpart SS of 40 CFR part 63, are not allowed.

#### § 63.8005 What requirements apply to my process vessels?

(a) You must meet each emission limit and work practice standard in Table 1 to this subpart that applies to you, except as specified in §§ 63.8050 and 63.8055, and you must meet each applicable requirement specified in § 63.8000(b). For each control device used to comply with Table 1 to this subpart, you must comply with subpart SS of this part 63 as specified in § 63.8000(c), except as specified in § 63.8000(d) and paragraphs (b) through (g) of this section.

(b) When subpart SS of this part 63 refers to process vents, it means process vessel vents for the purposes of this section.

(c) Process condensers, as defined in § 63.1251, are not considered to be control devices for process vessels.

(d) *Initial compliance.* (1) To demonstrate initial compliance with a percent reduction emission limit in Table 1 to this subpart, you must conduct the performance test or design evaluation under conditions as specified in § 63.7(e)(1), except that the performance test or design evaluation must be conducted under worst-case conditions. Also, the performance test for a control device used to control emissions from process vessels must be conducted according to § 63.1257(b)(8), including the submittal of a site-specific test plan for approval prior to testing. The requirements in § 63.997(e)(1)(i) and (iii) also do not apply for performance tests conducted to determine compliance with the emission limits for process vessels.

(2) For the initial compliance demonstration for condensers, you must determine uncontrolled emissions using the procedures specified in § 63.1257(d)(2), and you must determine controlled emissions using the procedures specified in § 63.1257(d)(3)(i)(B) and (iii).

(3) You must demonstrate that each process condenser is properly operated according to the procedures specified in § 63.1257(d)(2)(i)(C)(4)(ii) and (d)(3)(iii)(B). The reference in § 63.1257(d)(3)(iii)(B) to the alternative standard in § 63.1254(c) does not apply for the purposes of this subpart. As an alternative to measuring the exhaust gas

temperature, as required by § 63.1257(d)(3)(iii)(B), you may elect to measure the liquid temperature in the receiver.

(4) You must conduct a performance test or compliance demonstration equivalent to an initial compliance demonstration within 360 hours of a change in operating conditions that are not considered to be within the previously established worst-case conditions.

(e) *Establishing operating limits.* You must establish operating limits under the conditions required for your initial compliance demonstration, except you may elect to establish operating limit(s) for conditions other than those under which a performance test was conducted as specified in paragraph (e)(1) of this section and, if applicable, paragraph (e)(2) of this section.

(1) The operating limits may be based on the results of the performance test and supplementary information such as engineering assessments and manufacturer's recommendations. These limits may be established for conditions as unique as individual emission episodes. You must provide rationale in the precompliance report for the specific level for each operating limit, including any data and calculations used to develop the limit and a description of why the limit indicates proper operation of the control device. The procedures provided in this paragraph (e)(1) have not been approved by the Administrator and determination of the operating limit using these procedures is subject to review and approval by the Administrator.

(2) If you elect to establish separate operating limits for different emission episodes, you must maintain records as specified in § 63.8085(g) of each point at which you change from one operating limit to another, even if the duration of the monitoring for an operating limit is less than 15 minutes.

(f) *Averaging periods.* If you elect to establish separate operating limits for different emission episodes, you may elect to determine operating block averages instead of the daily averages specified in § 63.998(b)(3). An operating block is a period of time that is equal to the time from the beginning to end of an emission episode or sequence of emission episodes.

(g) *Flow indicators.* If flow to a control device could be intermittent, you must install, calibrate, and operate a flow indicator at the inlet or outlet of the control device to identify periods of no flow. Periods of no flow may not be used in daily or block averages, and it may not be used in fulfilling a minimum data availability requirement.

#### § 63.8010 What requirements apply to my storage tanks?

(a) You must meet each emission limit in Table 2 to this subpart that applies to your storage tanks, and you must meet each applicable requirement specified in § 63.8000(b). For each control device used to comply with Table 2 to this subpart, you must comply with subpart SS of this part 63 as specified in § 63.8000(c), except as specified in § 63.8000(d) and paragraphs (b) through (d) of this section.

(b) *Exceptions to subparts SS and WW of this part 63.* (1) If you conduct a performance test or design evaluation for a control device used to control emissions only from storage tanks, you must establish operating limits, conduct monitoring, and keep records using the same procedures as required in subpart SS of this part 63 for control devices used to reduce emissions from process vents instead of the procedures specified in §§ 63.985(c), 63.998(d)(2)(i), and 63.999(b)(2).

(2) When the term storage vessel is used in subparts SS and WW of this part 63, the term storage tank, as defined in § 63.8105 applies for the purposes of this subpart.

(c) *Planned routine maintenance.* The emission limits in Table 2 to this subpart for control devices used to control emissions from storage tanks do not apply during periods of planned routine maintenance. Periods of planned routine maintenance of each control device, during which the control device does not meet the emission limit specified in Table 2 to this subpart, must not exceed 240 hours per year (hr/yr). You may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed, it must indicate that no material will be added to the storage tank between the time the 240 hr/yr limit is exceeded and the control device is again operational, and it must be submitted at least 60 days before the 240 hr/yr limit will be exceeded.

(d) *Vapor balancing alternative.* As an alternative to the emission limits specified in Table 2 to this subpart, you may elect to implement vapor balancing in accordance with § 63.1253(f), except as specified in paragraphs (d)(1) and (2) of this section.

(1) To comply with § 63.1253(f)(6)(i), the owner or operator of an offsite cleaning and reloading facility must comply with §§ 63.7995 through 63.8105 instead of complying with § 63.1253(f)(7)(ii).

(2) You may elect to set a pressure relief device to a value less than the 2.5

psig required in § 63.1253(f)(5) if you provide rationale in your notification of compliance status report explaining why the alternative value is sufficient to prevent breathing losses at all times.

**§ 63.8015 What requirements apply to my equipment leaks?**

(a) You must meet each requirement in Table 3 to this subpart that applies to your equipment leaks, except as specified in paragraphs (b) through (d) of this section.

(b) The requirement in § 63.424(a) to inspect each piece of equipment during the loading of a gasoline cargo tank means when the equipment is operating in organic HAP service for the purposes of this subpart.

(c) When § 63.1036 refers to batch processes, any part of the miscellaneous coating manufacturing operations applies for the purposes of this subpart.

(d) For the purposes of this subpart, pressure testing for leaks in accordance with § 63.1036(b) is not required after reconfiguration of an equipment train if flexible hose connections are the only disturbed equipment.

**§ 63.8020 What requirements apply to my wastewater streams?**

(a) You must meet each requirement in Table 4 to this subpart that applies to your wastewater streams, and you must meet each applicable requirement specified in § 63.8000 and paragraphs (b) through (d) of this section.

(b) For each wastewater stream that you generate, you must either designate the wastewater stream as a Group 1 wastewater stream according to the procedures in paragraph (b)(1) of this section, or you must determine whether the wastewater stream is a Group 1 wastewater stream according to the procedures in paragraph (b)(2) of this section.

(1) You may designate any wastewater stream as a Group 1 wastewater stream. You do not have to determine the concentration for any designated Group 1 wastewater stream.

(2) For wastewater streams that you do not designate as Group 1 wastewater streams, you must use the procedures specified in § 63.144(b) to establish the concentrations, except as specified in paragraphs (b)(2)(i) and (ii) of this section.

(i) References to Table 8 compounds in § 63.144 do not apply for the purposes of this subpart.

(ii) *Alternative test methods.* (A) As an alternative to the test methods specified in § 63.144(b)(5)(i), you may use Method 8260 or 8270 as specified in § 63.1257(b)(10)(iii).

(B) As an alternative to using the methods specified in § 63.144(b)(5)(i),

you may conduct wastewater analyses using Method 1666 or 1671 of 40 CFR part 136, appendix A, and comply with the sampling protocol requirements specified in § 63.144(b)(5)(ii). The validation requirements specified in § 63.144(b)(5)(iii) do not apply if you use Method 1666 or 1671 of 40 CFR part 136, appendix A.

(c) For each enhanced biological treatment unit used to comply with the requirements in Table 4 to this subpart, you must monitor total suspended solids (TSS), biological oxygen demand (BOD), and the biomass concentration. In the precompliance report you must identify and provide rationale for proposed operating limits for these parameters, methods for monitoring, the frequency of monitoring, and recordkeeping and reporting procedures that will demonstrate proper operation of the enhanced biological treatment unit. Alternatively, you may use the precompliance report to request to monitor other parameters, and you must include a description of planned reporting and recordkeeping procedures and the basis for the selected monitoring frequencies and the methods that will be used.

(d) If you transfer the wastewater offsite for enhanced biological treatment, you must obtain written certification from the offsite facility stating that the offsite facility will comply with the requirements of this subpart. The certifying entity may revoke the certification by providing 90 days notice. Upon expiration of the notice period, you may not transfer wastewater to that treatment facility.

**§ 63.8025 What requirements apply to my transfer operations?**

(a) You must comply with each emission limit and work practice standard in Table 5 to this subpart that applies to your transfer operations, and you must meet all applicable requirements specified in § 63.8000(b). For each control device used to comply with Table 5 to this subpart, you must comply with subpart SS of this part 63 as specified in § 63.8000(c), except as specified in § 63.8000(d) and paragraph (b) of this section.

(b) If you have Group 1 transfer operations, as defined in § 63.8105, then all transfer racks used for bulk loading coatings must meet the requirements for high throughput transfer racks in subpart SS of this part.

**§ 63.8030 What requirements apply to my heat exchange systems?**

(a) You must comply with the requirements specified in Table 6 to this subpart that apply to your heat

exchange systems, except as specified in paragraphs (b) through (e) of this section.

(b) The phrase a chemical manufacturing process unit meeting the conditions of § 63.100(b)(1) through (b)(3) of this section in § 63.104(a) means the miscellaneous coating manufacturing operations defined in § 63.7985(b) for the purposes of this subpart.

(c) The reference to § 63.100(c) in § 63.104(a) does not apply for the purposes of this subpart.

(d) The reference to § 63.103(c)(1) in § 63.104(f)(1) does not apply. For the purposes of this subpart, records must be retained as specified in § 63.10(b)(1).

(e) The reference to the periodic report required by § 63.152(c) of subpart G of this part means the compliance report required by § 63.8075(e) for the purposes of this subpart.

**Alternative Means of Compliance**

**§ 63.8050 How do I comply with emissions averaging for stationary process vessels at existing sources?**

(a) As an alternative to complying with the requirements in Table 1 to this subpart for each individual stationary process vessel, you may elect to comply with emissions averaging for stationary process vessels greater than or equal to 250 gallons (gal) at your existing affected source as specified in paragraphs (b) through (e) of this section.

(b) *General requirements.* (1) A State may prohibit averaging of HAP emissions and require the owner or operator of an existing affected source to comply with the emission limits and work practice standards in Table 1 to this subpart.

(2) All stationary process vessels in an emissions averaging group must be equipped with a tightly-fitting vented cover.

(c) *Initial compliance.* To demonstrate initial compliance with the emissions averaging alternative, you must comply with the provisions in paragraphs (c)(1) through (4) of this section.

(1) Estimate uncontrolled emissions from each affected stationary process vessel in pounds per batch using the procedures specified in § 63.1257(d)(2), except as specified in paragraphs (c)(1)(i) and (ii) of this section. For the purposes of this section, uncontrolled emissions means the emissions from the vessel if it were equipped only with a tightly-fitting vented cover. You must identify the range of typical operating parameters and perform the calculation using the values that result in the highest emissions, and you must document the operating parameters and

resulting emissions calculations in the precompliance report.

(i) When you are required to calculate uncontrolled emissions from heating, you may not calculate emissions using Equation 13 of subpart GGG of this part 63.

(ii) The statement in § 63.1257(d)(2)(i)(B) that "the partial pressure of HAP shall be assumed to be 25 percent of the saturated value if the purge flow rate is greater than 100 scfm" does not apply. For the purposes of this subpart, multiply the HAP partial pressure in Equation 12 of 40 CFR part 63, subpart GGG by a HAP-specific saturation factor determined in accordance with Equations 1 through 3 of this section. Solve equation 1 of this section iteratively beginning with saturation factors (in the right-hand side of the equation) of 1.0 for each condensable compound. Stop iterating when the calculated saturation factors for all compounds are the same to two significant figures for subsequent iterations. Note that for multi-component emission streams, saturation factors must be calculated for all noncondensables in the emission stream.

$$S_i = \frac{K_i A}{K_i A + V + \sum_{i=1}^n S_i V_i^{sat}} \quad \text{Eq. 1}$$

$$V_i^{sat} = \frac{VP_i}{\left( P_T - \sum_{i=1}^n P_i \right)} \quad \text{Eq. 2}$$

$$K_i = K_o \left( \frac{M_o}{M_i} \right)^{1/3} \quad \text{Eq. 3}$$

where:

$S_i$ =saturation factor for individual condensable compounds in the emission stream

$P_i$ =partial pressure of individual condensable compounds in the emission stream calculated using Raoult's Law or other appropriate methods

$P_T$ =pressure of the vessel vapor space

$A$ =surface area of liquid

$V$ =purge flow rate as used in Equation

12 of 40 CFR part 63, subpart GGG

$V_i^{sat}$ =volumetric flowrate of condensable compounds in the emission stream

$K_i$ =mass transfer coefficient of individual condensable compounds in the emission stream

$K_o$ =mass transfer coefficient of a reference compound (e.g., 0.83 cm/s for water)

$M_o$ =molecular weight of reference compound (e.g., 18.02 for water)

$M_i$ =molecular weight of individual condensable compounds in the emission stream

$n$ =number of condensable compounds in the emission stream

(2) Estimate controlled emissions in pounds per batch for each vessel as specified in paragraphs (c)(2)(i) through (iii) of this section.

(i) Except as specified in paragraphs (c)(2)(ii) and (iii) of this section, estimate controlled emissions as if the vessel were controlled in compliance with entry 2.b.i. in Table 1 to this subpart.

(ii) Estimate the controlled emissions using the control level achieved on November 15, 1990 if that value is greater than the applicable control level required by entry 2.b.i. in Table 1 to this subpart.

(iii) Estimate the controlled emissions using the control level required to comply with a State or Federal rule other than this subpart if that level is greater than the applicable control level required by entry 2.b.i. in Table 1 to this subpart and the other rule was in effect before the date when you request approval to comply with emissions averaging.

(3) Determine actual emissions in pounds per batch for each vessel in accordance with paragraphs (c)(2)(i), (ii), or (iii), as applicable.

(i) If emissions are routed through a closed-vent system to a condenser control device, determine controlled emissions using the procedures specified in § 63.1257(d)(3).

(ii) If emissions are routed through a closed-vent system to any control device other than a condenser, determine actual emissions after determining the efficiency of the control device using the procedures in subpart SS of this part 63 as specified in § 63.8000(c).

(iii) If the vessel is vented to the atmosphere, then actual emissions are equal to the uncontrolled emissions estimated in accordance with paragraph (c)(1) of this section.

(4) Provide rationale in the precompliance report for why the sum of the actual emissions will be less than the sum of emissions from the vessels if they had been controlled in accordance with Table 1 to this subpart. The approved actual emissions calculated according to paragraph (c)(3) of this section are emission limits that must be incorporated into your operating permit.

(d) *Continuous compliance.* (1) Maintain a monthly log of the number of batches produced that can be correlated with the emissions estimates

per batch developed in accordance with paragraph (c) of this section.

(2) Sum the actual emissions for all of the process vessels in the emissions averaging group every three months, with the first 3-month period beginning on the compliance date, and compare the resulting total with the total emissions for the vessels calculated in accordance with paragraph (c)(2) of this section. Compliance is demonstrated if the sum of the actual emissions is less than the emissions estimated in accordance with paragraph (c)(2) of this section.

(3) For control devices, establish operating limits and monitor as specified in § 63.8000.

(e) *Recordkeeping and reporting.* Comply with §§ 63.8070, 63.8075, and 63.8080.

#### § 63.8055 How do I comply with a weight percent HAP limit in coating products?

(a) As an alternative to complying with the requirements in Table 1 to this subpart for each individual stationary process vessel at an existing source, you may elect to comply with a 5 weight percent HAP limit for process vessels at your affected source that are used to manufacture coatings with a HAP content of less than 0.05 kg per kg product as specified in paragraph (b) of this section.

(b) You may only comply with the alternative during the production of coatings that contain less than 5 weight percent HAP, as determined using any of the procedures specified in paragraphs (b)(1) through (3) of this section.

(1) Method 311 (appendix A to 40 CFR part 63).

(2) Method 24 (appendix A to 40 CFR part 60). You may use Method 24 to determine the mass fraction of volatile matter and use that value as a substitute for the mass fraction of HAP.

(3) You may use an alternative test method for determining mass fraction of HAP if you obtain prior approval by the Administrator. You must follow the procedure in § 63.7(f) to submit an alternative test method for approval.

#### Notification, Reports, and Records

##### § 63.8070 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e), (f)(4) and (6), 63.9(b) through (h) that apply to you by the dates specified.

(b) *Initial notification.* (1) As specified in § 63.9(b)(2), if you have an existing affected source on December 11, 2003, you must submit an initial notification

not later than 120 calendar days after December 11, 2003.

(2) As specified in § 63.9(b)(3), if you start up your new affected source on or after December 11, 2003, you must submit an initial notification not later than 120 calendar days after you become subject to this subpart.

(c) *Notification of performance test.* If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in § 63.7(b)(1). For any performance test required as part of the initial compliance procedures for process vessels in Table 1 to this subpart, you must also submit the test plan required by § 63.7(c) and the emission profile with the notification of the performance test.

**§ 63.8075 What reports must I submit and when?**

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report as specified in Table 9 to this subpart and paragraphs (b)(1) and (2) of this section.

(1) The compliance reports must be submitted semiannually. The first report must be submitted no later than 240 days after the applicable compliance date and shall cover the 6-month period beginning on the compliance date. Each subsequent compliance report must cover the 6-month period following the preceding period.

(2) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in Table 9.

(c) *Precompliance report.* You must submit a precompliance report to request approval of any of the information in paragraphs (c)(1) through (4) of this section. We will either approve or disapprove the report within 90 days after we receive it. If we disapprove the report, you must still be in compliance with the emission limitations and work practice standards in this subpart by the compliance date.

(1) Requests for approval to set operating limits for parameters other

than those specified in §§ 63.8005 through 63.8025, including parameters for enhanced biological treatment units. Alternatively, you may make these requests according to § 63.8(f).

(2) Descriptions of daily or per batch demonstrations to verify that control devices subject to § 63.8000(d)(3) are operating as designed.

(3) A description of the test conditions, data, calculations, and other information used to establish operating limits according to § 63.8005(e)(1).

(4) If you comply with emissions averaging in § 63.8050, the data and results of emission calculations as specified in § 63.8050(c)(1) through (3), and rationale for why the sum of actual emissions will be less than the sum of emissions if the process vessels were controlled in accordance with Table 1 to this subpart as specified in § 63.8050(c)(4).

(d) *Notification of compliance status report.* You must submit a notification of compliance status report according to the schedule in paragraph (d)(2) of this section, and the notification of compliance status report must include the information specified in paragraph (d)(2) of this section.

(1) You must submit the notification of compliance status report no later than 150 days after the applicable compliance date specified in § 63.7995.

(2) The notification of compliance status report must include the information in paragraphs (d)(3)(i) through (vi) of this section.

(i) The results of any applicability determinations (e.g., HAP content of coating products; halogenated vent stream determinations; group determinations for storage tanks, wastewater, and transfer operations; and equipment that is in organic HAP service).

(ii) The results of performance tests, engineering analyses, design evaluations, flare compliance assessments, inspections and repairs, and calculations used to demonstrate initial compliance according to §§ 63.8005 through 63.8025 and 63.8055. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures.

(iii) Descriptions of monitoring devices, monitoring frequencies, and the operating limits established during the initial compliance demonstrations, including data and calculations to support the levels you establish.

(iv) Identification of parts of the affected source that are subject to overlapping requirements described in § 63.8090 and the authority under which you will comply.

(v) Identify storage tanks for which you are complying with the vapor balancing alternative in § 63.8010(e).

(vi) If you transfer Group 1 wastewater stream to an offsite facility for treatment, include the name and location of the transferee and a description of the Group 1 wastewater stream that is sent to the treatment facility. If the offsite facility provides enhanced biological treatment, also include the certification required by § 63.8020(d) that the offsite facility will comply with the requirements of this subpart.

(e) *Compliance report.* The compliance report must contain the information specified in paragraphs (e)(1) through (8) of this section.

(1) Company name and address.

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

(3) Date of report and beginning and ending dates of the reporting period.

(4) Applicable records and information for periodic reports as specified in referenced subparts F, SS, TT, UU, and WW of this part 63.

(5) For each SSM during which excess emissions occur, the compliance report must include the information specified in paragraphs (e)(5)(i) and (ii) of this section.

(i) Records that the procedures specified in your startup, shutdown, and malfunction plan (SSMP) were followed or documentation of actions taken that are not consistent with the SSMP.

(ii) A description of each malfunction.

(6) The compliance report must contain the information on deviations, as defined in § 63.8105, according to paragraphs (e)(6)(i), (ii), and (iii) of this section.

(i) If there are no deviations from any emission limit, operating limit, or work practice standard specified in this subpart, include a statement that there were no deviations from the emission limits, operating limits, or work practice standards during the reporting period.

(ii) For each deviation from an emission limit, operating limit, and work practice standard that occurs at an affected source where you are not using a continuous monitoring system (CMS) to comply with the emission limit or work practice standards in this subpart, you must include the information in paragraphs (e)(6)(ii)(A) through (C) of this section.

(A) The total operating time of each affected source during the reporting period.

(B) Information on the number, duration, and cause of deviations

(including unknown cause, if applicable), as applicable, and the corrective action taken.

(C) Operating logs for the day(s) during which the deviation occurred, except operating logs are not required for deviations of the work practice standards for equipment leaks.

(iii) For each deviation from an emission limit or operating limit occurring at an affected source where you are using a CMS to comply with the emission limit in this subpart, you must include the information in paragraphs (e)(6)(iii)(A) through (K) of this section. This includes periods of SSM.

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

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

(C) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(D) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(E) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(F) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

(G) An identification of each HAP that is known to be in the emission stream or wastewater stream, as applicable.

(H) A description of the product being produced.

(I) Identification of the CMS.

(J) The date of the latest CMS certification or audit.

(K) The operating day or operating block average values of monitored parameters for each day(s) during which the deviation occurred.

(7) If you use a CEMS, and there were no periods during which it was out-of-control as specified in § 63.8(c)(7), include a statement that there were no periods during which the CEMS was out-of-control during the reporting period.

(8) *Notification of process change.* (i) Except as specified in paragraph (e)(8)(ii) of this section, whenever you change any of the information submitted in either the notification of compliance

status report or any previously reported change to the notification of compliance status report, you must document the change in your compliance report. The notification must include all of the information in paragraphs (e)(8)(i)(A) and (B) of this section.

(A) Revisions to any of the information reported in the original notification of compliance status report under paragraph (d) of this section.

(B) Information required by the notification of compliance status report under paragraph (d) of this section for changes involving the addition of processes or equipment at the affected source.

(ii) You must submit a report 60 days before the scheduled implementation date of any of the changes identified in paragraphs (e)(8)(ii)(A), (B), or (C) of this section.

(A) Any change to the information contained in either the precompliance report or any previously reported change to the precompliance report.

(B) A change in the status of a control device from small to large.

(C) A change in compliance status.

#### § 63.8080 What records must I keep?

You must keep the records specified in paragraphs (a) through (g) of this section.

(a) Each applicable record required by subpart A of this part 63 and in referenced subparts SS, TT, UU, and WW of this part 63.

(b) If complying with emissions averaging, records of the monthly number of batches for each process vessel, the quarterly actual emissions for each process vessel, the quarterly estimated emissions for each process vessel if it had been controlled as specified in Table 1 to this subpart, and comparison of the sums of the quarterly actual and estimated emissions as specified in § 63.8050(d).

(c) A record of each time a safety device is opened to avoid unsafe conditions in accordance with § 63.8000(b)(2).

(d) Records of the results of each CPMS calibration check and the maintenance performed, as specified in § 63.8000(d)(5).

(e) For each CEMS, you must keep the records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(f) In the SSMP required by § 63.6(e)(3), you are not required to include Group 2 or non-affected emission points. For equipment leaks only, the SSMP requirement is limited to control devices and is optional for other equipment.

(g) If you establish separate operating limits as allowed in § 63.8005(e), you must maintain a log of operation or a daily schedule indicating the time when you change from one operating limit to another.

#### Other Requirements and Information

##### § 63.8090 What compliance options do I have if part of my plant is subject to both this subpart and another subpart?

(a) *Compliance with 40 CFR parts 264 and 265, subparts AA, BB, and/or CC.*

(1) After the compliance dates specified in § 63.7995, if a control device that you use to comply with this subpart is also subject to monitoring, recordkeeping, and reporting requirements in 40 CFR part 264, subpart AA, BB, or CC; or the monitoring and recordkeeping requirements in 40 CFR part 265, subpart AA, BB, or CC; and you comply with the periodic reporting requirements under 40 CFR part 264, subpart AA, BB, or CC that would apply to the device if your facility had final-permitted status, you may elect to comply either with the monitoring, recordkeeping, and reporting requirements of this subpart; or with the monitoring and recordkeeping requirements in 40 CFR part 264 or 265 and the reporting requirements in 40 CFR part 264, as described in this paragraph (a), which constitute compliance with the monitoring, recordkeeping, and reporting requirements of this subpart. If you elect to comply with the monitoring, recordkeeping, and reporting requirements in 40 CFR parts 264 and/or 265, you must report the information required for the compliance report in § 63.8075(e), and you must identify in the notification of compliance status report required by § 63.8075(d) the monitoring, recordkeeping, and reporting authority under which you will comply.

(2) After the compliance dates specified in this section, if any equipment at an affected source that is subject to this subpart is also subject to 40 CFR part 264, subpart BB or to 40 CFR part 265, subpart BB, then compliance with the recordkeeping and reporting requirements of 40 CFR part 264 and/or 265 may be used to comply with the recordkeeping and reporting requirements of § 63.1255, to the extent that the requirements of 40 CFR part 264 and/or 265 duplicate the requirements of this subpart. You must identify in the notification of compliance status report required by § 63.8075(d) if you will comply with the recordkeeping and reporting authority under 40 CFR part 264 and/or 265.

(b) *Compliance with 40 CFR part 60, subpart Kb.* After the compliance dates specified in § 63.7995, you are in compliance with this subpart for any storage tank that is assigned to miscellaneous coating manufacturing operations and that is both controlled with a floating roof and in compliance with the provisions of 40 CFR part 60, subpart Kb. You are in compliance with this subpart if you have a storage tank with a fixed roof, closed-vent system, and control device in compliance with 40 CFR part 60, subpart Kb, you must comply with the monitoring, recordkeeping, and reporting requirements in this subpart. You must also identify in your notification of compliance status report required by § 63.8075(d) which storage tanks are in compliance with 40 CFR part 60, subpart Kb.

**§ 63.8095 What parts of the General Provisions apply to me?**

Table 10 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

**§ 63.8100 Who implements and enforces this subpart?**

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

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraphs (b)(1) through (4) of this section are retained by the Administrator of U.S. EPA and are not delegated to the State, local, or tribal agency.

(1) Approval of alternatives to the non-opacity emission limits and work practice standards in § 63.8000(a) 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.

**§ 63.8105 What definitions apply to this subpart?**

(a) For an affected source complying with the requirements in subpart SS of this part 63, the terms used in this subpart and in subpart SS of this part 63 have the meaning given them in § 63.981, except as specified in §§ 63.8000(d)(5)(ii) and (7), 63.8010(c)(2), 63.8025(b), and paragraph (g) of this section.

(b) For an affected source complying with the requirements in subpart TT of this part 63, the terms used in this subpart and in subpart TT of this part 63 have the meaning given them in § 63.1001.

(c) For an affected source complying with the requirements in subpart UU of this part 63, the terms used in this subpart and in subpart UU of this part 63 have the meaning given them in § 63.1020.

(d) For an affected source complying with the requirements in subpart WW of this part 63, the terms used in this subpart and subpart WW of this part 63 have the meaning given them in § 63.1061, except as specified in §§ 63.8000(d)(7), 63.8010(c)(2), and paragraph (g) of this section.

(e) For an affected source complying with requirements in §§ 63.1253, 63.1257, and 63.1258, the terms used in this subpart and in §§ 63.1253, 63.1257, and 63.1258 have the meaning given them in § 63.1251, except as specified in § 63.8000(d)(7) and paragraph (g) of this section.

(f) For an affected source complying with the requirements of § 63.104, the terms used in this subpart and in § 63.104 have the meaning given them in § 63.101, except as specified in § 63.8000(d)(7) and paragraph (g) of this section.

(g) All other terms used in this subpart are defined in the CAA, in 40 CFR 63.2, and in this paragraph (g). If a term is defined in § 63.2, § 63.981, § 63.1001, § 63.1020, § 63.1061, or § 63.1251 and in this paragraph (g), the definition in this paragraph (g) applies for the purposes of this subpart.

*Bulk loading* means the loading, into a tank truck or rail car, of liquid coating products that contain one or more of the organic HAP, as defined in section 112 of the CAA, from a loading rack. A loading rack is the system used to fill tank trucks and railcars at a single geographic site.

*Coating* means any material such as a paint, ink, or adhesive that is intended to be applied to a substrate and consists of a mixture of resins, pigments, solvents, and/or other additives. Typically, these materials are described by Standard Industry Classification

(SIC) codes 285 or 289 and North American Industry Classification System (NAICS) codes 3255 and 3259.

*Construction* means the onsite fabrication, erection, or installation of an affected source. Addition of new equipment to an affected source does not constitute construction, but it may constitute reconstruction of the affected source if it satisfies the definition of reconstruction in § 63.2.

*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, 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, 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.

*Enhanced biological treatment system* means an aerated, thoroughly mixed treatment unit(s) that contains biomass suspended in water followed by a clarifier that removes biomass from the treated water and recycles recovered biomass to the aeration unit. The mixed liquor volatile suspended solids (biomass) is greater than 1 kilogram per cubic meter throughout each aeration unit. The biomass is suspended and aerated in the water of the aeration unit(s) either by submerged air flow or mechanical agitation. A thoroughly mixed treatment unit is a unit that is designed and operated to approach or achieve uniform biomass distribution and organic compound concentration throughout the aeration unit by quickly dispersing the recycled biomass and the wastewater entering the unit.

*Excess emissions* means emissions greater than those allowed by the emission limit.

*Group 1a storage tank* means a storage tank at an existing source with a capacity greater than or equal to 20,000 gal storing material that has a maximum true vapor pressure of total organic HAP greater than or equal to 1.9 pounds per square inch, absolute (psia). Group 1a storage tank also means a storage tank at a new source with either a capacity greater than or equal to 25,000 gal storing material that has a maximum true vapor pressure of total HAP greater than or equal to 0.1 psia or a capacity

greater than or equal to 20,000 gal and less than 25,000 gal storing material that has a maximum true vapor pressure of total HAP greater than or equal to 1.5 psia.

*Group 1b storage tank* means a storage tank at a new source that has a capacity greater than or equal to 10,000 gal, stores material that has a maximum true vapor pressure of total organic HAP greater than or equal to 0.02 psia, and is not a Group 1a storage tank.

*Group 2 storage tank* means a storage tank that does not meet the definition of a Group 1a or Group 1b storage tank.

*Group 1 transfer operations* means all bulk loading of coating products if the coatings contain greater than or equal to 3.0 million gallons per year (gal/yr) of HAP with a weighted average HAP partial pressure greater than or equal to 1.5 psia.

*Group 2 transfer operations* means bulk loading of coating products that does not meet the definition of Group 1 transfer operations.

*Group 1 wastewater stream* means a wastewater stream that contains total partially soluble and soluble HAP at an annual average concentration greater than or equal to 4,000 parts per million by weight (ppmw) and load greater than or equal to 750 pounds per year (lb/yr) at an existing source or greater than or equal to 1,600 ppmw and any partially soluble and soluble HAP load at a new source.

*Group 2 wastewater stream* means a wastewater stream that does not meet the definition of a Group 1 wastewater stream.

*Halogenated vent stream* means a vent stream determined to contain halogen atoms in organic compounds at a concentration greater than or equal to 20 ppmv as determined by the procedures specified in § 63.8000(b).

*Hydrogen halide and halogen HAP* means hydrogen chloride, chlorine, and hydrogen fluoride.

*In organic HAP service* means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP as determined according to the provisions of § 63.180(d). The provisions of § 63.180(d) also specify how to determine that a piece of equipment is not in organic HAP service.

*Large control device* means a control device that controls total HAP emissions of greater than or equal to 10 tpy, before control.

*Maximum true vapor pressure* means the equilibrium partial pressure exerted by the total organic HAP in the stored or transferred liquid at the temperature equal to the highest calendar-month

average of the liquid storage or transfer temperature for liquids stored or transferred above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for liquids stored or transferred at the ambient temperature, as determined:

(1) In accordance with methods described in American Petroleum Institute Publication 2517, *Evaporative Loss From External Floating-Roof Tanks* (incorporated by reference as specified in § 63.14 of subpart A of this part 63); or

(2) As obtained from standard reference texts; or

(3) As determined by the American Society for Testing and Materials Method D2879-83 (incorporated by reference as specified in § 63.14 of subpart A of this part); or

(4) Any other method approved by the Administrator.

*Partially soluble HAP* means HAP listed in Table 7 of this subpart.

*Point of determination (POD)* means each point where process wastewater exits the miscellaneous coating operations.

**Note to definition for point of determination:** The regulation allows determination of the characteristics of a wastewater stream at the point of determination or downstream of the point of determination if corrections are made for changes in flow rate and annual average concentration of partially soluble and soluble HAP compounds as determined in § 63.144. Such changes include losses by air emissions; reduction of annual average concentration or changes in flow rate by mixing with other water or wastewater streams; and reduction in flow rate or annual average concentration by treating or otherwise handling the wastewater stream to remove or destroy HAP.

*Process vessel* means any stationary or portable tank or other vessel with a capacity greater than or equal to 250 gal and in which mixing, blending, diluting, dissolving, temporary holding, and other processing steps occur in the manufacturing of a coating.

*Process vessel vent* means a vent from a process vessel or vents from multiple process vessels that are manifolded together into a common header, through which a HAP-containing gas stream is, or has the potential to be, released to the atmosphere. Emission streams that are undiluted and uncontrolled containing less than 50 ppmv HAP, as determined through process knowledge that no HAP are present in the emission stream or using an engineering assessment as discussed in § 63.1257(d)(2)(ii), test data using Method 18 of 40 CFR part 60, appendix A, or any other test method

that has been validated according to the procedures in Method 301 of appendix A of this part, are not considered process vessel vents. Flexible elephant trunk systems when used with closed vent systems and drawing ambient air (*i.e.*, the system is not ducted, piped, or otherwise connected to the unit operations) away from operators when vessels are opened are not process vessel vents. Process vessel vents do not include vents on storage tanks, wastewater emission sources, or pieces of equipment subject to the requirements in Table 3 of this subpart. A gas stream going to a fuel gas system is not a process vessel vent. A gas stream routed to a process for a process purpose is not a process vessel vent.

*Recovery device*, as used in the wastewater provisions, means an individual unit of equipment used for the purpose of recovering chemicals for fuel value (*i.e.*, net positive heating value), use, reuse, or for sale for fuel value, use, or reuse. Examples of equipment that may be recovery devices include organic removal devices such as decanters, strippers, or thin-film evaporation units. To be a recovery device, a decanter and any other equipment based on the operating principle of gravity separation must receive only multi-phase liquid streams. A recovery device is considered part of the miscellaneous coating manufacturing operations.

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

*Safety device* means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purposes of this subpart, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes and practices, or other

requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials.

*Shutdown* means the cessation of operation of an affected source, any process vessels within an affected source, or equipment required or used to comply with this subpart if steps taken to cease operation differ from those under routine procedures for removing the vessel or equipment from service. Shutdown also applies to the emptying and degassing of storage tanks.

*Small control device* means a control device that controls total HAP emissions of less than 10 tpy, before control.

*Soluble HAP* means the HAP listed in Table 8 of this subpart.

*Startup* means the setting in operation of a new affected source. For new equipment added to an affected source, including equipment required or used to comply with this subpart, startup means the first time the equipment is put into operation. Startup includes the setting in operation of equipment any time the

steps taken differ from routine procedures for putting the equipment into operation.

*Storage tank* means a tank or other vessel that is used to store organic liquids that contain one or more HAP as raw material feedstocks or products. The following are not considered storage tanks for the purposes of this subpart:

(1) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;

(2) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere;

(3) Vessels storing organic liquids that contain HAP only as impurities;

(4) Wastewater storage tanks; and

(5) Process vessels.

*Total organic compounds or (TOC)* means the total gaseous organic compounds (minus methane and ethane) in a vent stream.

*Wastewater storage tank* means a stationary structure that is designed to

contain an accumulation of wastewater and is constructed primarily of nonearthen materials (e.g., wood, concrete, steel, plastic) which provide structural support.

*Wastewater stream* means water that is discarded from miscellaneous coating manufacturing operations through a POD, and that contains an annual average concentration of total partially soluble and soluble HAP compounds of at least 1,600 ppmw at any flow rate. For the purposes of this subpart, noncontact cooling water is not considered a wastewater stream.

*Work practice standard* means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

**Tables to Subpart HHHHH of Part 63**

As required in § 63.8005, you must meet each emission limit and work practice standard in the following table that applies to your process vessels:

TABLE 1 TO SUBPART HHHHH OF PART 63—EMISSION LIMITS AND WORK PRACTICE STANDARDS FOR PROCESS VESSELS

For each . . .	You must . . .	And you must . . .
1. Portable process vessel at an existing source.	Equip the vessel with a cover or lid that must be in place at all times when the vessel contains a HAP.	Non applicable
2. Stationary process vessel at an existing source.	<p>a. Equip the vessel with a cover or lid that must be in place at all times when the vessel contains a HAP; or.</p> <p>b. Equip the vessel with a tightly fitting vented cover or lid that must be closed at all times when the vessel contains HAP.</p>	<p>i. Considering both capture and any combination of control (except a flare), reduce emissions by ≥75 percent by weight for each HAP with a vapor pressure ≥0.6 kPa and by ≥60 percent for each HAP with a vapor pressure &lt;0.6 kPa.</p> <p>ii. Reduce emissions of each HAP with a vapor pressure ≥0.6 kPa by ≥75 percent by weight and each HAP with a vapor pressure &lt;0.6 kPa by ≥60 percent by weight by venting emissions through a closed-vent system to any combination of control devices (except a flare); or</p> <p>iii. Reduce emissions of total organic HAP by venting emissions from a non-halogenated vent stream through a closed-vent system to a flare; or</p> <p>iv. Reduce emissions of total organic HAP by venting emissions through a closed-vent system to a condenser that reduces the outlet gas temperature to:                      &lt;10°C if the process vessel contains HAP with a partial pressure &lt;0.6 kPa, or                      &lt;2°C if the process vessel contains HAP with a partial pressure ≥0.6 kPa and &lt;17.2 kPa, or                      &lt;-5°C if the process vessel contains HAP with a partial pressure ≥17.2 kPa.</p>

TABLE 1 TO SUBPART HHHHH OF PART 63—EMISSION LIMITS AND WORK PRACTICE STANDARDS FOR PROCESS VESSELS—Continued

For each . . .	You must . . .	And you must . . .
3. Portable and stationary process vessel at a new source.	a. Equip the vessel with a tightly fitting vented cover or lid that must be closed at all times when the vessel contains HAP.	i. Reduce emissions of total HAP by ≥95 percent by weight by venting emissions through a closed-vent system to any combination of control devices (except a flare); or ii. Reduce emissions of total organic HAP by venting emissions from a non-halogenated vent stream through a closed-vent system to a flare; or iii. Reduce emissions of total organic HAP by venting emissions through a closed-vent system to a condenser that reduces the outlet gas temperature to: < -4°C if the process vessel contains HAP with a partial pressure <0.7 kPa, or <20°C if the process vessel contains HAP with a partial pressure ≥0.7 kPa and <17.2 kPa, or < -30°C if the process vessel contains HAP with a partial pressure ≥17.2 kPa.
4. Halogenated vent steam from a process vessel subject to the requirements of item 2 or 3 of this table for which you use a combustion control device to control organic HAP emissions.	a. Use a halogen reduction device after the combustion control device; or  b. Use a halogen reduction device before the combustion control device.	i. Reduce overall emissions of hydrogen halide and halogen HAP by ≥95 percent; or ii. Reduce overall emissions of hydrogen halide and halogen HAP to ≤0.45 kilogram per hour (kg/hr). Reduce the halogen atom mass emission rate to ≤0.45 kg/hr.

As required in § 63.8010, you must meet each emission limit in the following table that applies to your storage tanks:

TABLE 2 TO SUBPART HHHHH OF PART 63—EMISSION LIMITS FOR STORAGE TANKS

For each . . .	Then you must . . .
1. Group 1a storage tank . . . . .	a. Comply with the requirements of subpart WW of this part, except as specified in § 63.8010(b); or b. Reduce total organic HAP emissions from the storage tank by ≥90 percent by weight by venting emissions through a closed-vent system to any combination of control devices (excluding a flare); or c. Reduce total organic HAP emissions from the storage tank by venting emissions from a non-halogenated vent stream through a closed-vent system to a flare.
2. Group 1b storage tank . . . . .	a. Comply with the requirements of subpart WW of this part, except as specified in § 63.8010(b); or b. Reduce total organic HAP emissions from the storage tank by ≥80 percent by weight by venting emissions through a closed-vent system to any combination of control devices (excluding a flare); or c. Reduce total organic HAP emissions from the storage tank by venting emissions from a non-halogenated vent stream through a closed-vent system to a flare.

As required in § 63.8015, you must meet each requirement in the following table that applies to your equipment leaks:

TABLE 3 TO SUBPART HHHHH OF PART 63—REQUIREMENTS FOR EQUIPMENT LEAKS

For all . . .	You must . . .
1. Equipment that is in organic HAP service at an existing source.	a. Comply with the requirements in §§ 63.424(a) through (d) and 63.428(e), (f), and (h)(4), except as specified in § 63.8015(b); or b. Comply with the requirements of subpart TT of this part; or c. Comply with the requirements of subpart UU of this part, except as specified in § 63.8015(c) and (d).
2. Equipment that is in organic HAP service at a new source.	a. Comply with the requirements of subpart TT of this part; or b. Comply with the requirements of subpart UU of this part, except as specified in § 63.8015(c) and (d).

**TABLE 4 TO SUBPART HHHHH OF PART 63—EMISSION LIMITS AND WORK PRACTICE STANDARDS FOR WASTEWATER STREAMS**

For each . . .	You must . . .
1. Wastewater tank used to store a Group 1 wastewater stream.	Maintain a fixed roof, which may have openings necessary for proper venting of the tank, such as pressure/vacuum vent or j-pipe vent.
2. Group 1 wastewater stream.	a. Convey using hard-piping and treat the wastewater as a hazardous waste in accordance with 40 CFR part 264, 265, or 266 either onsite or offsite; or b. If the wastewater contains <50 ppmw of partially soluble HAP, you may elect to treat the wastewater in an enhanced biological treatment system that is located either onsite or offsite.

As required in § 63.8025, you must meet each emission limit and work practice standard in the following table that applies to your transfer operations:

**TABLE 5 TO SUBPART HHHHH OF PART 63—EMISSION LIMITS AND WORK PRACTICE STANDARDS FOR TRANSFER OPERATIONS**

For each . . .	You must . . .
1. Group 1 transfer operation vent stream.	a. Reduce emissions of total organic HAP by ≥75 percent by weight by venting emissions through a closed-vent system to any combination of control devices (except a flare); or b. Reduce emissions of total organic HAP by venting emissions from a non-halogenated vent stream through a closed-vent system to a flare; or c. Use a vapor balancing system designed and operated to collect organic HAP vapors displaced from tank trucks and railcars during loading and route the collected HAP vapors to the storage tank from which the liquid being loaded originated or to another storage tank connected by a common header.
2. Halogenated Group 1 transfer operation vent stream for which you use a combustion device to control organic HAP emissions.	a. Use a halogen reduction device after the combustion device to reduce emissions of hydrogen halide and halogen HAP by ≥95 percent by weight or to ≤0.45 kg/hr; or b. Use a halogen reduction device before the combustion device to reduce the halogen atom mass emission rate to ≤0.45 kg/hr.

As required in § 63.8030, you must meet each requirement in the following table that applies to your heat exchange systems:

**TABLE 6 TO SUBPART HHHHH OF PART 63—REQUIREMENTS FOR HEAT EXCHANGE SYSTEMS**

For each . . .	You must . . .
Heat exchange system, as defined in § 63.101.	Comply with the requirements in § 63.104, except as specified in § 63.8030.

As specified in § 63.8020, the partially soluble HAP in wastewater that are subject to management and treatment requirements in this subpart are listed in the following table:

**TABLE 7 TO SUBPART HHHHH OF PART 63—PARTIALLY SOLUBLE HAZARDOUS AIR POLLUTANTS**

Chemical name . . .	CAS No.
1. 1,1,1-Trichloroethane (methyl chloroform) .....	71556
2. 1,1,2,2-Tetrachloroethane .....	79345
3. 1,1,2-Trichloroethane .....	79005
4. 1,1-Dichloroethylene (vinylidene chloride) .....	75354
5. 1,2-Dibromoethane .....	106934
6. 1,2-Dichloroethane (ethylene dichloride) .....	107062
7. 1,2-Dichloropropane .....	78875
8. 1,3-Dichloropropene .....	542756
9. 2,4,5-Trichlorophenol .....	95954
10. 2-Butanone (MEK) .....	78933
11. 1,4-Dichlorobenzene .....	106467
12. 2-Nitropropane .....	79469
13. 4-Methyl-2-pentanone (MIBK) .....	108101
14. Acetaldehyde .....	75070
15. Acrolein .....	107028

TABLE 7 TO SUBPART HHHHH OF PART 63—PARTIALLY SOLUBLE HAZARDOUS AIR POLLUTANTS—Continued

Chemical name . . .	CAS No.
16. Acrylonitrile .....	107131
17. Allyl chloride .....	107051
18. Benzene .....	71432
19. Benzyl chloride .....	100447
20. Biphenyl .....	92524
21. Bromoform (tribromomethane) .....	75252
22. Bromomethane .....	74839
23. Butadiene .....	106990
24. Carbon disulfide .....	75150
25. Chlorobenzene .....	108907
26. Chloroethane (ethyl chloride) .....	75003
27. Chloroform .....	67663
28. Chloromethane .....	74873
29. Chloroprene .....	126998
30. Cumene .....	98828
31. Dichloroethyl ether .....	111444
32. Dinitrophenol .....	51285
33. Epichlorohydrin .....	106898
34. Ethyl acrylate .....	140885
35. Ethylbenzene .....	100414
36. Ethylene oxide .....	75218
37. Ethylidene dichloride .....	75343
38. Hexachlorobenzene .....	118741
39. Hexachlorobutadiene .....	87683
40. Hexachloroethane .....	67721
41. Methyl methacrylate .....	80626
42. Methyl-t-butyl ether .....	1634044
43. Methylene chloride .....	75092
44. N-hexane .....	110543
45. N,N-dimethylaniline .....	121697
46. Naphthalene .....	91203
47. Phosgene .....	75445
48. Propionaldehyde .....	123386
49. Propylene oxide .....	75569
50. Styrene .....	100425
51. Tetrachloroethylene (perchloroethylene) .....	79345
52. Tetrachloromethane (carbon tetrachloride) .....	56235
53. Toluene .....	108883
54. Trichlorobenzene (1,2,4-) .....	120821
55. Trichloroethylene .....	79016
56. Trimethylpentane .....	540841
57. Vinyl acetate .....	108054
58. Vinyl chloride .....	75014
59. Xylene (m) .....	108383
60. Xylene (o) .....	95476
61. Xylene (p) .....	106423

As specified in § 63.8020, the soluble HAP in wastewater that are subject to management and treatment requirements of this subpart are listed in the following table:

TABLE 8 TO SUBPART FFFF OF PART 63—SOLUBLE HAZARDOUS AIR POLLUTANTS

Chemical name . . .	CAS No.
1. Acetonitrile .....	75058
2. Acetophenone .....	98862
3. Diethyl sulfate .....	64675
4. Dimethyl hydrazine (1,1) .....	58147
5. Dimethyl sulfate .....	77781
6. Dinitrotoluene (2,4) .....	121142
7. Dioxane (1,4) .....	123911
8. Ethylene glycol dimethyl ether .....	110714
9. Ethylene glycol monobutyl ether acetate .....	112072
10. Ethylene glycol monomethyl ether acetate .....	110496
11. Isophorone .....	78591
12. Methanol .....	67561
13. Nitrobenzene .....	98953
14. Toluidine (o-) .....	95534

TABLE 8 TO SUBPART FFFF OF PART 63—SOLUBLE HAZARDOUS AIR POLLUTANTS—Continued

Chemical name . . .	CAS No.
15. Triethylamine .....	121448

As required in § 63.8075(a) and (b), you must submit each report that applies to you on the schedule shown in the following table:

TABLE 9 TO SUBPART HHHHH OF PART 63—REQUIREMENTS FOR REPORTS

You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Precompliance report .....	The information specified in § 63.8075(c) .....	At least 6 months prior to the compliance date; or for new sources, with the application for approval of construction or reconstruction.
2. Notification of compliance status report .....	The information specified in § 63.8075(d) .....	No later than 150 days after the compliance date specified in § 63.7995.
3. Compliance report .....	The information specified in § 63.8075(e) .....	Semiannually according to the requirements in § 63.8075(b).

As specified in § 63.8095, the parts of the General Provisions that apply to you are shown in the following table:

TABLE 10 TO SUBPART HHHHH OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART HHHHH

Citation	Subject	Explanation
§ 63.1 .....	Applicability .....	Yes.
§ 63.2 .....	Definitions .....	Yes.
§ 63.3 .....	Units and Abbreviations .....	Yes.
§ 63.4 .....	Prohibited Activities .....	Yes.
§ 63.5 .....	Construction/Reconstruction .....	Yes.
§ 63.6(a) .....	Applicability .....	Yes.
§ 63.6(b)(1)–(4) .....	Compliance Dates for New and Reconstructed sources.	Yes.
§ 63.6(b)(5) .....	Notification .....	Yes.
§ 63.6(b)(6) .....	[Reserved].	
§ 63.6(b)(7) .....	Compliance Dates for New and Reconstructed Area Sources That Become Major.	Yes.
§ 63.6(c)(1)–(2) .....	Compliance Dates for Existing Sources.	Yes.
§ 63.6(c)(3)–(4) .....	[Reserved].	
§ 63.6(c)(5) .....	Compliance Dates for Existing Area Sources That Become Major.	Yes.
§ 63.6(d) .....	[Reserved].	
§ 63.6(e)(1)–(2) .....	Operation & Maintenance .....	Yes.
§ 63.6(e)(3)(i), (ii), and (v) through (viii).	SSMP .....	Yes, except information regarding Group 2 emission points and equipment leaks is not required in the SSMP, as specified in § 63.8080(f).
§ 63.6(e)(3)(iii) and (iv) .....	Recordkeeping and Reporting During Startup, Shutdown, and Malfunction (SSM).	No, §§ 63.998(d)(3) and 63.998(c)(1)(ii)(D) through (G) specify the recordkeeping requirement for SSM events, and § 63.8075(e)(5) specifies reporting requirements.
§ 63.6(f)(1) .....	Compliance Except During SSM ...	Yes.
§ 63.6(f)(2)–(3) .....	Methods for Determining Compliance.	Yes.
§ 63.6(g)(1)–(3) .....	Alternative Standard .....	Yes.
§ 63.6(h) .....	Opacity/Visible Emission (VE) Standards.	Only for flares for which Method 22 observations are required as part of a flare compliance assessment.
§ 63.6(i)(1)–(14) .....	Compliance Extension .....	Yes.
§ 63.6(j) .....	Presidential Compliance Exemption.	Yes.
§ 63.7(a)(1)–(2) .....	Performance Test Dates .....	Yes, except substitute 150 days for 180 days.
§ 63.7(a)(3) .....	CAA Section 114 Authority .....	Yes, and this paragraph also applies to flare compliance assessments as specified under § 63.997(b)(2).
§ 63.7(b)(1) .....	Notification of Performance Test ...	Yes.

TABLE 10 TO SUBPART HHHHH OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART HHHHH—  
Continued

Citation	Subject	Explanation
§ 63.7(b)(2)	Notification of Rescheduling	Yes.
§ 63.7(c)	Quality Assurance/Test Plan	Yes, except the test plan must be submitted with the notification of the performance test if the control device controls process vessels.
§ 63.7(d)	Testing Facilities	Yes.
§ 63.7(e)(1)	Conditions for Conducting Performance Tests.	Yes, except that performance tests for process vessels must be conducted under worst-case conditions as specified in § 63.8005.
§ 63.7(e)(2)	Conditions for Conducting Performance Tests.	Yes.
§ 63.7(e)(3)	Test Run Duration	Yes.
§ 63.7(f)	Alternative Test Method	Yes.
§ 63.7(g)	Performance Test Data Analysis	Yes.
§ 63.7(h)	Waiver of Tests	Yes.
§ 63.8(a)(1)	Applicability of Monitoring Requirements.	Yes.
§ 63.8(a)(2)	Performance Specifications	Yes.
§ 63.8(a)(3)	[Reserved].	
§ 63.8(a)(4)	Monitoring with Flares	Yes.
§ 63.8(b)(1)	Monitoring	Yes.
§ 63.8(b)(2)–(3)	Multiple Effluents and Multiple Monitoring Systems.	Yes.
§ 63.8(c)(1)	Monitoring System Operation and Maintenance.	Yes.
§ 63.8(c)(1)(i)	Maintain and operate CMS	Yes.
§ 63.8(c)(1)(ii)	Routine repairs	Yes.
§ 63.8(c)(1)(iii)	SSMP for CMS	Yes.
§ 63.8(c)(2)–(3)	Monitoring System Installation	Yes.
§ 63.8(c)(4)	Requirements	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63. This subpart does not contain requirements for continuous opacity monitoring systems (COMS).
§ 63.8(c)(4)(i)	CMS Requirements	No. This subpart does not require COMS.
§ 63.8(c)(4)(ii)	CMS requirements	Yes.
§ 63.8(c)(5)	COMS Minimum Procedures	No. This subpart does not contain opacity or VE limits.
§ 63.8(c)(6)	CMS Requirements	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63.
§ 63.8(c)(7)–(8)	CMS Requirements	Only for CEMS. Requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63.
§ 63.8(d)	CMS Quality Control	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63.
§ 63.8(e)	CMS Performance Evaluation	Section 63.8(e)(6)(ii) does not apply because this subpart does not require COMS. Other sections apply only for CEMS; requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63.
§ 63.8(f)(1)–(5)	Alternative Monitoring Method	Yes, except you may also request approval using the precompliance report.
§ 63.8(f)(6)	Alternative to Relative Accuracy Test.	Only for CEMS.
§ 63.8(g)(1)–(4)	Data Reduction	Only when using CEMS, except § 63.8(g)(2) does not apply because data reduction requirements for CEMS are specified in § 63.8000(d)(4)(iv).
§ 63.8(g)(5)	Data Reduction	The requirements for COMS do not apply because this subpart has no opacity or VE limits. No. Requirements for CEMS are specified in § 63.8000(d)(4). Requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63.
§ 63.9(a)	Notification Requirements	Yes.
§ 63.9(b)(1)–(5)	Initial Notifications	Yes.
§ 63.9(c)	Request for Compliance Extension	Yes.
§ 63.9(d)	Notification of Special Compliance Requirements for New Source.	Yes.
§ 63.9(e)	Notification of Performance Test	Yes.
§ 63.9(f)	Notification of VE/Opacity Test	No. This subpart does not contain opacity or VE limits.
§ 63.9(g)	Additional Notifications When Using CMS.	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63.
§ 63.9(h)(1)–(6)	Notification of Compliance Status	Yes, except this subpart has no opacity or VE limits, and § 63.9(h)(2) does not apply because § 63.8075(d) specifies the required contents and due date of the notification of compliance status report.
§ 63.9(i)	Adjustment of Submittal Deadlines	Yes.
§ 63.9(j)	Change in Previous Information	No, § 63.8075(e)(8) specifies reporting requirements for process changes.
§ 63.10(a)	Recordkeeping/Reporting	Yes.
§ 63.10(b)(1)	Recordkeeping/Reporting	Yes.

TABLE 10 TO SUBPART HHHHH OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART HHHHH—  
Continued

Citation	Subject	Explanation
§ 63.10(b)(2)(i)–(iv)	Records related to SSM	No, §§ 63.998(d)(3) and 63.998(c)(1)(ii)(D) through (G) specify recordkeeping requirements for periods of SSM.
§ 63.10(b)(2)(iii)	Records related to maintenance of air pollution control equipment.	Yes.
§ 63.10(b)(2)(vi), (x), and (xi)	CMS Records	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63.
§ 63.10(b)(2)(vii)–(ix)	Records	Yes.
§ 63.10(b)(2)(xii)	Records	Yes.
§ 63.10(b)(2)(xiii)	Records	Yes.
§ 63.10(b)(2)(xiv)	Records	Yes.
§ 63.10(b)(3)	Records	Yes.
§ 63.10(c)(1)–(6),(9)–(15)	Records	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63.
§ 63.10(c)(7)–(8)	Records	No. Recordkeeping requirements are specified in § 63.8080.
§ 63.10(d)(1)	General Reporting Requirements	Yes.
§ 63.10(d)(2)	Report of Performance Test Results.	Yes.
§ 63.10(d)(3)	Reporting Opacity or VE Observations.	No. This subpart does not contain opacity or VE limits.
§ 63.10(d)(4)	Progress Reports	Yes.
§ 63.10(d)(5)(i)	SSM Reports	No, § 63.8075(e)(5) and (6) specify the SSM reporting requirements.
§ 63.10(d)(5)(ii)	Immediate SSM reports	No.
§ 63.10(e)(1)–(2)	Additional CMS Reports	Only for CEMS, but § 63.10(e)(2)(ii) does not apply because this subpart does not require COMS.
§ 63.10(e)(3)	Reports	No. Reporting requirements are specified in § 63.8075.
§ 63.10(e)(3)(i)–(iii)	Reports	No. Reporting requirements are specified in § 63.8075.
§ 63.10(e)(3)(iv)–(v)	Excess Emissions Reports	No. Reporting requirements are specified in § 63.8075.
§ 63.10(e)(3)(vi)–(viii)	Excess Emissions Report and Summary Report.	No. Reporting requirements are specified in § 63.8075.
§ 63.10(e)(4)	Reporting COMS data	No. This subpart does not contain opacity or VE limits.
§ 63.10(f)	Waiver for Recordkeeping/Reporting.	Yes.
§ 63.11	Flares	Yes.
§ 63.12	Delegation	Yes.
§ 63.13	Addresses	Yes.
§ 63.14	Incorporation by Reference	Yes.
§ 63.15	Availability of Information	Yes.

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