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National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[FRL–7039–4]

RIN 2060–AG27

National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates national emission standards for hazardous air pollutants (NESHAP) for new and existing boat manufacturing facilities. The processes regulated include fiberglass resin and gel coat operations, carpet and fabric adhesive operations, and aluminum recreational boat painting operations. The EPA has identified boat manufacturing as a major source of hazardous air pollutants (HAP), such as styrene, methyl methacrylate (MMA), methylene chloride (dichloromethane), toluene, xylene, n-hexane, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), and methyl chloroform (1,1,1-trichloroethane). The NESHAP will implement section 112(d) of the Clean Air Act (CAA) by requiring all major sources to meet HAP emission standards reflecting the application of the maximum achievable control technology (MACT). We estimate the final NESHAP will reduce nationwide emissions of HAP from these facilities by 3,450 tons per year (tpy) (approximately 35 percent from the 1997 level of emissions).

EFFECTIVE DATE: August 22, 2001.

ADDRESSES: *Docket.* Docket No. A–95–44 contains the information considered by EPA in developing the NESHAP. This docket is located at the U.S. EPA, Air and Radiation Docket and Information Center (Mail Code 6102), 401 M Street, SW, Room M–1500, Waterside Mall, Washington, DC 20460. The docket may be inspected from 8 a.m. to 5:30 p.m., Monday through Friday, excluding legal holidays.

FOR FURTHER INFORMATION CONTACT: For further information concerning applicability and rule determinations, contact the appropriate State or local agency representative. If no State or local representative is available, contact the EPA Regional Office staff listed in § 63.13. For information concerning the analyses performed in developing the NESHAP, contact Mr. Mark Morris, Organic Chemicals Group, Emission Standards Division (MD–13), U.S. EPA, Research Triangle Park, North Carolina 27711, (919) 541–5416, morris.mark@epa.gov.

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

Public Comments. The NESHAP for boat manufacturing were proposed on July 14, 2000 (65 FR 43842) and 27 comment letters were received on the proposal. The comment letters are available in Docket No. A–95–44, along with a summary of the comment letters and EPA's responses to the comments. In response to the public comments, EPA adjusted the final NESHAP where appropriate.

Worldwide Web (WWW). In addition to being available in the docket, an electronic copy of today's final NESHAP will also be available on the WWW through the Technology Transfer Network (TTN). Following the Administrator's signature, a copy of the NESHAP will be posted on the TTN's policy and guidance page for newly proposed or final rules at http://www.epa.gov/ttn/oarpg/t3pfpr.html. The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541–5384.

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

Category	NAICS code	SIC code	Examples of regulated entities
Industrial	336612	3732	Boat manufacturing facilities that perform fiberglass production operations or aluminum coating operations.
	.....	3731	Shipbuilding and repair facilities that perform fiberglass production operations.
Federal Government	336612	3731 3732	Federally owned facilities (e.g., Navy shipyards) that perform fiberglass production operations.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. Not all facilities classified under the NAICS or SIC codes are affected. Other types of entities not listed could be affected. To determine whether your facility is regulated by this action, you should examine the applicability criteria in § 63.5683 of the final NESHAP. 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.

Judicial Review: The NESHAP for boat manufacturing facilities were proposed on July 14, 2000 (65 FR 43842). This action announces EPA's final decisions on the NESHAP. Under section 307(b)(1) of the CAA, judicial review of the final NESHAP is available by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by October 22, 2001. Only those objections to the NESHAP which were raised with reasonable specificity during the period for public comment may be raised during judicial review. Under section 307(b)(2) of the CAA, the requirements that are the subject of today's final NESHAP may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

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

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I. Introduction

A. What Is the Purpose of the NESHAP?

The purpose of the final NESHAP is to protect the public health by reducing emissions of HAP from boat manufacturing facilities.

B. What Is the Statutory Authority for NESHAP?

Section 112 of the CAA requires that we promulgate standards for the control of HAP from both new and existing major sources. A major source of HAP is defined as any stationary source or group of stationary sources 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 single HAP or 25 tpy or more of multiple HAP.

The CAA requires the standards 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 MACT.

We based the final NESHAP for boat manufacturing for new and existing sources on the MACT floor control level. 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 HAP emission sources achieve the level of control already achieved by the better-controlled and lower-emitting sources in each category. 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 standards for existing sources can be less stringent than standards for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources (or the best-performing 5 sources for categories or subcategories with fewer than 30 sources).

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

C. What Processes and Operations Constitute Boat Manufacturing?

The final NESHAP regulate fiberglass boat and aluminum recreational boat manufacturing operations. The emissions from these boat manufacturing operations and processes are fugitive in nature. Fugitive emissions result from HAP evaporating from the resins, gel coats, solvents, adhesives, and surface coatings used in manufacturing processes. The following paragraphs provide a brief description of the operations found at boat manufacturing facilities.

Fiberglass boat manufacturing operations. Fiberglass boats are built from glass fiber reinforcements laid in a mold and saturated with a polyester or vinylester plastic resin. The resin hardens to form a rigid plastic part reinforced with the fiberglass. The resin is mixed with a catalyst as it is applied that causes a cross-linking reaction between the resin molecules. The cross-linking reaction causes the resin to harden from a liquid to a solid.

Fiberglass manufacturing processes are generally considered either ''open molding'' or ''closed molding.'' In open molding, fiberglass boat parts are built ''from the outside in'' according to three basic process steps:

(1) The mold is sprayed with a layer of gel coat, which is a pigmented polyester resin that hardens and becomes the smooth outside surface of the part.

(2) The inside of the hardened gel coat layer is coated with a ''skin coat'' of chopped glass fibers and polyester or vinylester resin.

(3) Additional layers of fiberglass cloth or chopped glass fibers saturated with resin are added until the part is the final thickness.

The same basic process is used to build or repair molds with tooling gel coat and tooling resin.

In closed molding, the resin is applied to fabric placed between the halves of a two-piece mold. Three basic types of closed molding used in boat manufacturing are resin infusion molding, resin transfer molding, and compression molding with sheet molding compound.

The polyester and vinylester resins that are used in fiberglass boat manufacturing contain styrene as a solvent and a cross-linking agent. Gel coats also contain MMA as a solvent, and styrene. Styrene and MMA are HAP, and a fraction evaporates during resin and gel coat application and curing. Resins and gel coats containing styrene and MMA are also used to make the molds used in producing fiberglass parts.

Mixing is done to stir the resin or gel coat and promoters, fillers, or other additives before being applied to the parts. Some HAP from the resin and gel coat are emitted during the mixing process.

Resin and gel coat application equipment requires solvent cleaning to remove uncured resin or gel coat when not in use. The resin or gel coat will catalyze in the hoses or gun if not flushed with a solvent after each use.

Fabric and carpet adhesive operations. The interiors of many types of fiberglass boats and aluminum recreational boats are covered with carpeting or fabric to improve appearance, provide traction, or deaden sound. The material is bonded to the interior with contact adhesives. These adhesives often contain HAP solvents, such as methylene chloride, toluene, xylenes, and methyl chloroform (1,1,1-trichloroethane). The solvents evaporate as the adhesives dry.

Aluminum recreational boat surface coatings. Aluminum recreational boat hull topsides and decks are painted with coatings applied with spray guns. These coatings may be high-gloss polyurethane coatings or low-gloss single-part coatings. These surface coatings often contain HAP solvents, such as toluene, xylenes, and isocyanates.

The HAP-containing solvents are also used to clean surfaces before finishing (wipedown solvents) and for cleaning paint and coating spray guns.

II. Summary of the Final NESHAP

This preamble section discusses the final NESHAP as they apply to ''you,'' the owner or operator of a new or existing boat manufacturing facility.

A. What Sources and Operations Are Subject to the NESHAP?

The final NESHAP will regulate organic HAP from major sources that manufacture aluminum recreational boats (that is, noncommercial and nonmilitary aluminum boats) or all types of fiberglass boats. Coating operations on vessels used for commercial and military purposes are covered by the shipbuilding and repair NESHAP (40 CFR part 63, subpart II).

The final NESHAP apply to fiberglass boat manufacturers making all sizes and types of fiberglass boats using the operations listed below:

- All open molding operations, including pigmented gel coat, clear gel coat, production resin, tooling resin, and tooling gel coat.
- All closed molding resin operations.
- All resin and gel coat application equipment cleaning.
- All resin and gel coat mixing operations.
- All carpet and fabric adhesive operations.

The final NESHAP apply to aluminum recreational boat manufacturing facilities performing the operations listed below:

- All aluminum recreational boat surface coating and associated spray gun cleaning and wipedown solvent operations.
- All carpet and fabric adhesive operations.

B. What Pollutants Are Regulated?

The final NESHAP regulate the total organic HAP content in the materials used in each regulated operation. The final NESHAP do not set limits for individual species of HAP. The HAP emitted by boat manufacturing facilities typically include styrene, MMA, toluene, xylenes, methyl chloroform (1,1,1-trichloroethane), MEK, n-hexane, and MIBK. However, the total organic HAP content limit includes all organic HAP listed in section 112(b) of the CAA.

C. What do the Final NESHAP Require?

The final NESHAP have various formats for the different operations being regulated. For open molding resin and gel coat operations, you must comply with a HAP emission limit that is calculated for your facility using MACT model point value equations, which are described in section II.D.

You can demonstrate compliance with the HAP emission limit for your facility either by (1) averaging emissions with the MACT model point value equations, (2) complying with equivalent material HAP content limits for each type of open molding operation, or (3) using an add-on control device. The HAP emissions limit and equivalent HAP content limits are the same for new and existing sources. You may use averaging for all of your open molding operations or only for some of them. For those operations not included in the emissions average, you must comply with one of the alternative provisions.

For resin operations, different HAP content limits apply to atomized and nonatomized resin application methods. The HAP content limits for open molding are presented in Table 2 to subpart VVVV. If you use an add-on control device to meet the emissions limit, the emissions limit is calculated using the MACT model point value equations and is in units of kilograms (kg) of organic HAP per megagram of resin or gel coat consumed.

As stated above, you may use a combination of compliance options for the different resin and gel coat operations within your facility. For example, a hull production line may use several resins and gel coats. You may choose to use a laminating resin that complies with the appropriate HAP content limit, but decide to use the averaging approach for the skin coat resin and the production gel coats. In another example, you could include in the average all production resins and pigmented gel coats at your facility, but decide not to include clear gel coat, tooling resin, and tooling gel coat. You could also use averaging to use a mix of atomized and nonatomized resin application methods but at different HAP contents from those in Table 2 to subpart VVVV.

Other operations regulated by the final NESHAP will be subject to work practice requirements or HAP content limits. Resin and gel coat mixing containers with a capacity of 208 liters (55 gallons) or more must be covered. Routine resin and gel coat application equipment cleaning operations must use solvents containing no more than 5 percent organic HAP, but solvents used to remove cured resin or gel coat from equipment are exempt. The containers used to hold the exempt solvent and to clean equipment with cured resin and gel coat must be covered. Carpet and fabric adhesive operations must use adhesives containing no more than 5 percent organic HAP.

Aluminum recreational boat wipedown solvents and surface coatings are subject to HAP content limits. Aluminum recreational boat spray gun cleaning operations are subject to a work practice requirement.

Compliance with the emissions limits in the final NESHAP is based on a 12-month rolling average except when an add-on control device is used. At the end of every month, you determine compliance for each operation based on the HAP content and material consumption data collected over the past 12 months. When an add-on control device is used, compliance is determined through emissions testing and subsequent monitoring.

D. What Is the MACT Model Point Value and How Is it Used in the Final NESHAP?

The MACT model point value is a number calculated for each open molding operation and is a surrogate for emissions. The MACT model point value is a way to rank the relative performance of different resin and gel coat emissions reduction techniques. This approach allows you to create control strategies using different resin and gel coat emissions reduction techniques. The final NESHAP provide equations to calculate MACT model point values based on HAP content and application method for each material

that you use. These MACT model point values are then averaged and compared to limits in the final NESHAP to determine if your open molding operations are in compliance.

The MACT model point values have units of kg of HAP per megagram of resin or gel coat applied. It is important to note that the MACT model point values are surrogates for emissions, and the MACT model point value equations are used only for determining compliance with the emission limits for open molding operations. The MACT model point value equations should not be used in other environmental programs for estimating emissions in place of true emission factor equations or site-specific data.

The MACT model point value equations account only for HAP content and application method. Other factors (including curing time, part thickness, and operator technique) can have significant effects on emissions, but these factors are not accounted for in the MACT model point value equations. Determining the HAP content of materials and the method of application is relatively easy, but it is difficult to determine the other factors. Also, part thickness and curing time can be specific to the part being manufactured, so limiting these factors would impede production. Therefore, factors other than HAP content and application method are not included in the MACT model point value equations.

E. When Must I Comply?

Existing boat manufacturing facilities must comply within 3 years of August 22, 2001. New sources that commence construction after July 14, 2000 must comply by August 22, 2001 or upon startup, whichever is later. Existing and new area sources that become major sources after August 22, 2001 must comply within 1 year after becoming a major source or within 3 years of August 22, 2001, whichever is later.

The CAA instructs EPA to establish a compliance date or dates for existing sources that will provide for compliance ''as expeditiously as practicable, but in no event later than 3 years after the effective date.''

Existing sources using pollution prevention approaches for compliance will need to make changes in application equipment and raw materials. We believe these sources need the full 3–year period provided by the CAA to evaluate different resins, gel coats, carpet and fabric adhesives, or aluminum recreational boat surface coatings and the effects of these changes on production processes and product performance. In addition, we believe that providing the maximum amount of allowable time will encourage more sources to use compliant materials rather than emissions averaging, thereby reducing the amount of records and paperwork needed to demonstrate initial and continuous compliance.

If an existing source chooses to use an add-on control device to comply, the full 3 years provided by the CAA is necessary to allow sufficient time to design, purchase, install, and work out operational problems that occur in trying to start up a new control device.

F. How Do I Demonstrate Compliance?

Unless you are using an add-on control device, you must measure and record the HAP content of all the materials regulated by the final NESHAP. You may determine HAP content using test methods specified in the NESHAP, or you may use documentation provided by the material manufacturer, such as a material safety data sheet (MSDS), to show compliance. Although you may use either the test methods specified in the NESHAP or the manufacturer's documentation to show compliance, we will use the test method results to determine compliance if they differ from the manufacturer's documentation.

Compliance with the HAP content limits is based on the weighted-average HAP content for each material on a 12-month rolling-average basis. Compliance is determined at the end of every month (12 times per year) based on the past 12 months of data. To determine weighted-average HAP content, you will also need to monitor and record the amount of each regulated material used per month, as well as HAP content. On the compliance date, new and existing sources must begin collecting the data needed to demonstrate compliance.

If all of the material in a particular operation meets the applicable HAP content limit, then you will not need to record the amount of material used. Likewise, you will not need to perform and record any calculations to determine weighted-average HAP content.

For open molding resin and gel coat operations, how you show compliance will depend on which compliance option you choose. For example, if you choose to average among several open molding resin and gel coat operations, you will have greater operating flexibility, but you will also need to do more recordkeeping and calculations to show compliance than if you comply with each individual HAP content limit. Also, you must complete an implementation plan for the open molding operations at your facility that are included in an averaging option. The implementation plan must describe the resin and gel coat materials you plan to use, their HAP contents, and how you will apply those materials so that you are in compliance. The plan must also include calculations showing that your choice of materials and application methods will achieve compliance.

You must keep records of the HAP content of all materials that are subject to HAP content limits. You must also keep records of the amount of material used and any calculations you perform to determine compliance using weighted-average HAP contents or the averaging option for open molding operations. Every month, you must inspect the covers required by the work practice standards for resin and gel coat mixing containers and aluminum recreational boat coating spray gun cleaners. You must also keep records of the results of these inspections and any repairs made to the covers. All records must be kept for 5 years (at least the last 2 years of records must be kept onsite). After the initial compliance demonstration, all sources must complete semiannual compliance reports.

Today's final NESHAP contain the specific monitoring, recordkeeping, and reporting requirements for each regulated operation.

G. How Do I Demonstrate Compliance if I Use an Enclosure and an Add-On Control Device?

If you use an enclosure (such as a spray booth) and add-on control, you must use EPA Method 204 to prove that the enclosure is a total enclosure. If the enclosure is not a total enclosure, you must use a temporary enclosure to measure the fugitive emissions from the enclosure and the control device. Stack testing is used to determine compliance with the emissions limit. You must use either EPA Method 25A to measure emissions as total hydrocarbons (as a surrogate for total HAP) or EPA Method 18 for specific HAP. New and existing sources that comply using add-on control devices must conduct the required performance testing no later than 180 days after the compliance date.

During and after the initial performance test, you must monitor and record certain control device parameters to ensure that the control device continues to be operated as it was during the test. For example, for thermal oxidizers you must monitor and record combustion temperature and maintain the temperature above an allowable minimum value. For control devices other than thermal oxidizers, you must

identify parameters that demonstrate proper control device operation and have these parameters approved by the EPA. Monitored operating parameters must be kept within the allowable ranges to demonstrate compliance with the control device operating requirements.

III. Summary of Environmental, Energy, and Economic Impacts

A. What Facilities Are Affected by the NESHAP?

There are approximately 119 existing facilities manufacturing fiberglass boats or aluminum recreational boats that are major sources and will be subject to the final NESHAP. The rate of growth for the boat manufacturing industry is estimated to be five new facilities per year for the next 5 years.

B. What Are the Air Quality Impacts?

The 1997 baseline emissions from the boat manufacturing industry are estimated at 9,920 tpy. The final NESHAP will reduce HAP from existing sources by 3,450 tpy from the baseline level, a reduction of 35 percent.

The final NESHAP will not result in any increase in other air pollution emissions. While combustion devices can result in increased sulfur dioxide and nitrogen oxide emissions, we do not expect anyone to comply by installing new combustion devices during the next 5 years.

C. What Are the Water Quality Impacts?

We estimate that the final NESHAP will have no adverse water quality impacts. We do not expect anyone to comply by using add-on control devices or process modifications that will generate wastewater.

D. What Are the Solid and Hazardous Waste Impacts?

We estimate that the final NESHAP will decrease the amount of solid waste generated by the boat manufacturing industry by approximately 400 tpy. The decrease in solid waste is directly related to switching to nonatomized resin application equipment (e.g., flowcoaters and resin rollers). Switching to flowcoaters decreases overspray because of the greater transfer efficiency of resin from flowcoaters to the part being manufactured. A decrease in overspray consequently reduces the amount of waste from disposable floor coverings, cured resin waste, and personal protective equipment (PPE) for workers. Disposable floor coverings are replaced on a periodic basis to prevent resin buildup on the floor. We estimate that solid waste generation of floor coverings will decrease by approximately 350 tpy, and that cured resin solid waste will decrease by approximately 50 tpy.

Decreased overspray from flowcoaters will result in a decreased usage of PPE, which also reduces the amount of solid waste. Workers who use flowcoaters typically wear less PPE than when using spray guns because of the reduced presence of resin aerosols and lower styrene levels in the workplace. Because we did not have information on the many different types of PPE currently used, we did not estimate this decrease in solid waste.

Some facilities that switch from spray guns to flowcoaters may have a small increase of hazardous waste from the used flowcoater cleaning solvents. However, most facilities will not see an increase, and the overall impact on the industry will be small relative to the solid waste reductions. Nearly all flowcoaters require resin and catalyst to be mixed inside the gun (internal-mix) and must be flushed when work is stopped for more than a few minutes. External-mix spray guns do not need to be flushed because resin is mixed with catalyst outside the gun. Facilities that switch from external-mix spray guns to flowcoaters will use more solvent. Solvent usage should not change at facilities switching from internal-mix spray guns to flowcoaters.

The most common flushing solvents are acetone and water-based emulsifiers. Only a couple of ounces of solvent are typically needed to flush the mixing chamber and nozzle of flowcoaters and internal- mix spray guns. We have observed during site visits that this small quantity of solvent is usually sprayed into the air or onto the floor coverings and allowed to evaporate.

We do not have adequate data to predict the potential solvent waste impact from switching to flowcoaters. The magnitude of the impact depends on the type of gun currently used (internal-or external-mix), the frequency of flushing, and the type of solvent used. However, because of the small amount of solvent used, and since most is allowed to evaporate, we believe the overall solvent waste increase will be small compared to the solid waste reductions.

E. What Are the Energy Impacts?

Compliance with the NESHAP is not expected to cause any increase in energy consumption at new or existing facilities. No new or existing facilities are expected to install add-on control devices to comply with the final NESHAP in the first 5 years after promulgation. One facility currently uses a thermal oxidizer to control some of their styrene and MMA emissions from fiberglass boat manufacturing operations.

F. What Are the Cost Impacts?

We estimate that nationwide annual compliance costs for the existing facilities will be $14 million. This estimate includes annualized capital costs and increased material costs for purchasing more expensive, lower-HAP materials. Annual costs also include monitoring, recordkeeping, and reporting costs. The estimated annual cost of reduced HAP is $4,060/ton.

The capital costs will be for the purchase of new resin application equipment, resin mixer covers, and adhesive application equipment. The estimated cost of new resin application equipment (flowcoaters) is $6,000 per unit (includes flowcoater, hoses, and resin and catalyst pumps). The estimated cost of new adhesive application equipment is also approximately $6,000 per unit. The resin and gel coat mixer covers will be approximately $180 per year per container.

No capital costs are predicted for mold construction or aluminum recreational boat surface coating operations.

G. What Are the Economic Impacts?

The EPA prepared an economic impact analysis to evaluate the primary and secondary impacts of the proposed and final NESHAP on the boat manufacturing market, consumers, and society. Because the characteristics of boats vary greatly throughout the industry, we evaluated the market by assessing the impacts on six separate market segments of the industry, including: outboard boats, inboard runabouts/sterndrive, inboard cruisers/yachts, jet boats/personal watercraft, sailboats, and canoes. The total annualized social cost (in 1994 dollars) of the final NESHAP on the industry is $13.0 million, which is 0.2 percent of total baseline revenue. Generally, the analysis indicates a minimal change in market prices and quantity of boats sold. Imports will increase negligibly, with a corresponding decrease in exports. The analysis also suggests a loss (at the maximum) of 48 employees out of the 51,500 employees in the industry. The impacts on specific market segments are summarized in the table below.

TABLE 2.—ECONOMIC IMPACT OF FINAL NESHAP ON BOAT MARKET SEGMENTS

Boat market segment	Change in price	Change in market output
Outboard Boats	0.1%	−0.3%
Inboard Runabouts/Sterndrive	0.1%	−0.1%
Inboard Cruisers/Yachts	0.0%	−0.0%
Jet Boats/Personal Watercraft	0.0%	−0.0%
Sailboats	0.1%	−0.2%
Canoes	0.1%	−0.1%

The analysis also predicts the number of facilities that will close as a result of the cost of complying with the final NESHAP. The EPA used market level information on total predicted change in quantity to infer how many plants would close if the quantity decrease was borne entirely by one (or more) facility. For example, if the market analysis predicts that 1,000 fewer boats are produced and the average facility produces 500 boats, then the impact is equivalent to two facility closures. Using this approach, the predicted reduction in quantity did not equal even one facility closure in any of the six market segments. While this does not mean that no facilities will close as a result of the final NESHAP, it does indicate that the final NESHAP has minimal total impacts, and that any facility closure will likely be the result of poor baseline cost conditions rather than a direct result of the compliance burden.

IV. Summary of Changes Since Proposal

In response to comments received on the proposed NESHAP and after further analysis, the following changes have been made.

A. Operations Not Covered by the NESHAP

The exemptions in the applicability section of the final NESHAP (§ 63.5683(d)) have been revised to clarify that the NESHAP do not apply to adhesives that are used to bond aluminum parts or other parts that are not fiberglass. This exemption does not apply to carpet and fabric adhesives, which are regulated by the NESHAP. We are also exempting research and development activities and activities in analytical laboratories. A definition of research and development activity has been added to § 63.5779 of the final NESHAP.

B. Determining Whether a Facility Is a Major Source or Area Source

Section 63.5686(b) contains material consumption restrictions that allow a source to limit their potential to emit HAP to much less than the major source thresholds without otherwise obtaining a federally enforceable operating permit. We have added a third material consumption restriction that boat manufacturers may use to demonstrate they are not a major source. In the new method, a fiberglass or aluminum recreational boat manufacturing facility is an area source and exempt from the standards if the materials consumed per year at the facility contain less than 5 tons of a single HAP and less than 12.5 tons of a combination of HAP. The two methods included in the NESHAP at proposal have been retained in the final NESHAP. The usage limits ensure that a facility's potential and actual emissions of HAP are below the major source thresholds of 10 tons of a single HAP and 25 tons of a combination of HAP.

The final NESHAP contain additional modifications to these provisions to ensure that the usage limits will keep actual emissions from most facilities substantially below the major thresholds. These modifications include a requirement that at least 90 percent of annual HAP emissions from the facility must come from the fiberglass boat manufacturing operations or the aluminum recreational boat manufacturing operations. If the facility has sources of HAP emissions other than these materials, the owner or operator must keep any records necessary to demonstrate that the facility meets the 90 percent criterion.

The final NESHAP also require owners and operators to maintain records to demonstrate that they do not exceed the annual material or HAP usage rates, based on a 12-month rolling-average basis. These records include monthly usage records for the following: all resins and gel coats used in fiberglass boat manufacturing operations; carpet and fabric adhesives; surface wipedown solvents, application gun cleaning solvents, and paints and coatings used in aluminum recreational boat manufacturing operations; documentation of HAP content (if needed); and any other records necessary to document emissions from source categories other than boat manufacturing.

A facility may exceed the usage limits and still remain an area source exempt from the standards if, before exceeding the limit, the facility obtains other limits (such as a federally enforceable State operating limit on their potential to emit) that keep its potential to emit HAP below the major source thresholds. If a facility exceeds the usage limits and does not have some other limit on its potential to emit, the facility becomes a major source and thereafter must comply with the standards on the applicable compliance date in the NESHAP. These provisions prevent facilities from alternating between area-source and major-source status while evading major source requirements. Also, these provisions make it possible from a legal standpoint to consider the usage cutoff levels as limiting a source's potential to emit HAP.

C. Open Molding Resin and Gel Coat Operations

The standards for open molding operations in § 63.5698 have been revised to include exemptions for several specialty materials. Production resins (including skin coat resins) used to build military vessels that must meet military specifications and those used on vessels built to U.S. Coast Guard specifications for lifesaving equipment and small passenger vessels will be exempt from the production resin HAP content limits. Pure 100 percent vinylester resins that are used for skin coats will also be exempt from the production resin HAP content limits; the exempt resin cannot exceed 5 percent of total production resin usage. However, these specialty production resins and 100 percent vinylester skin coat resins must be applied with nonatomized (non-spray) application equipment. Gel coat materials that are used for part and mold repair and touch up will be exempt from the open molding standards. The gel coat materials included in this exemption must not exceed 1 percent of the total gel coat used at that facility on a 12-month rolling-average basis.

The final NESHAP contain a new section (§ 63.5714) which specifies procedures for calculating compliance for filled tooling and production resins based on the as-applied MACT model point value for the filled resin.

D. Standards for Resin and Gel Coat Mixing Operations

Section 63.5731 has been revised to clarify that the standards for resin and gel coat mixing operations apply to on-site mixing of putties and polyputties.

E. Standards for Resin and Gel Coat Application Equipment Cleaning Operations

Section 63.5734 has been revised such that all solvents (both virgin and recycled) that are used for routine resin and gel coat application equipment cleaning are subject to the same 5 percent organic HAP content limit. Solvents used for removing cured resin or gel coat from application equipment are not subject to the 5 percent organic HAP content limit.

Section 63.5737 has been revised to state that if a cleaning solvent is recycled (either on-site or off-site), a boat manufacturer may use a certification or measurement of the HAP content of the material as originally purchased from the material supplier for demonstrating compliance. The requirement in § 63.5737(b) for operators to record the amount of recycled solvent they purchase has been deleted.

The requirements for cured resin and gel coat solvent cleaning operations in § 63.5734(b) have been revised so they are the same as the requirements in § 63.462 of 40 CFR part 63, subpart T (national emission standards for halogenated solvent cleaning), for containers holding more than 2 gallons of halogenated solvent. In addition, the final NESHAP state that solvent containers used for cleaning cured resin and gel coat from equipment are exempt from subpart T.

F. Standards for Carpet and Fabric Adhesive Operations

The HAP content limit for carpet and fabric adhesives in § 63.5740 has been changed such that all carpet and fabric adhesives must contain no more than 5 percent organic HAP.

G. Standards for Aluminum Recreational Boat Surface Coating Operations

The format of the emission limit for aluminum recreational boat wipedown solvents in § 63.5743(a) has been revised, and the emission limit has been recalculated to conform with the new format. The recalculated emission limit for aluminum wipedown solvents is 0.33 kg organic HAP per liter of total coating solids (2.75 pounds per gallon). Total coating solids is the combined solids from primers, clear coats, and top coats.

Boat manufacturers will also have the option of complying with a combined emission limit for aluminum wipedown operations and aluminum coating operations. The combined emission limit is 1.55 kg organic HAP per liter of total coating solids (12.9 pounds per gallon), which is the sum of the individual limits for aluminum wipedown operations (0.33 kg organic HAP per liter coating solids (2.75 pounds per gallon)) and aluminum coating operations (1.22 kg organic HAP per liter coating solids (10.2 pounds per gallon)). If a boat manufacturer complies with the combined emission limit, they can offset higher HAP from one operation with lower HAP from the other operation.

The work practices for aluminum coating spray gun cleaning operations in § 63.5743 have been revised so that spray gun cleaning operations that use recycled non-HAP solvents (which may contain trace amounts of HAP) are not subject to the spray gun cleaning work practice requirements. Recycled cleaning solvents that contain trace amounts of HAP (5 percent or less by weight) are considered to be non-HAP. A provision has been added to § 63.5743 to specifically allow for the use of alternative spray gun cleaning work practices approved according to the procedures in § 63.6(g). In § 63.5755(b)(1), the requirement that enclosed spray gun cleaners have covers that ''close properly'' has been revised to state that the covers ''must have no visible gaps.''

H. Methods for Determining Hazardous Air Pollutant Content

Section 63.5758(a) has been revised to state that only organic HAP are included in determining HAP content. Inorganic HAP are added as pigments to gel coats and surface coatings and are not emitted from the operations regulated by these NESHAP and, therefore, are not included in determining HAP content. This section has also been revised to allow the use of ASTM D1259–85 (Standard Test Method for Nonvolatile Content of Resins), and EPA Method 24 for measuring volatile organic matter content as a surrogate for demonstrating the HAP content of coatings. If volatile organic matter is used as a surrogate for HAP content, then the boat manufacturer must assume that all volatile organic matter is HAP.

Section 63.5758 has also been revised to recognize the fact that some material manufacturers and suppliers report on their MSDS a manufacturing target value for HAP constituents, such as styrene in resin and gel coat. If the organic HAP content is provided as a single value, you may assume the value is a manufacturing target value and actual organic HAP content may vary from the target value. If a separate measurement of the total organic HAP content using the methods specified in the NESHAP is less than 2 percentage points higher than the value for total organic HAP content provided by the material supplier or manufacturer, then you may use the provided value to demonstrate compliance. If the measured total organic HAP content exceeds the provided value by 2 percentage points or more, then you must use the measured organic HAP content to determine compliance. This allowance does not apply if the HAP content is reported on an MSDS as a range. In that case, the measured HAP content cannot exceed the upper limit of the reported HAP content range.

Section 63.5758 has been revised to provide guidance on determining the HAP content of solvent blends when the MSDS has reported a solvent blend but not the HAP content of the solvent blend. The guidance includes a table of values for the HAP content of commonly used solvent blends.

Section 63.5758 has been revised to clarify how total HAP is calculated. In determining total HAP, you must include HAP that are present at concentrations equal to or greater than 1.0 percent, unless the HAP is an OSHA-defined carcinogen, in which case you must include the HAP in the total if it is present at a concentration equal to or greater than 0.1 percent. For example, if a material contains four species of noncarcinogenic HAP that are each present at 0.9 percent by weight, none of these four species needs to be included in the total HAP calculation.

I. Notifications, Reports, and Records

We have revised the emission limitations in §§ 63.5698(b) and 63.5743(a) and (b) so that compliance is demonstrated on a 12-month rolling-average basis, rather than a 3-month rolling-average basis for sources not using an add-on control device. For new and existing sources that do not use an add-on control device, the initial 12-month compliance period will begin on the compliance date.

For sources using an add-on control device, compliance is based on a performance test and continuous monitoring of the control device.

J. Definitions

We have revised the definition of hazardous air pollutant (HAP) in § 63.5779 so it has the same wording as the definition of HAP in § 63.2. We have added a definition of research and development activities which will be exempt from the NESHAP. We have also revised the definition of aluminum boat to better distinguish aluminum recreational boats from ships which are subject to the ship building and repair surface coating NESHAP (40 CFR part 63, subpart II). The revised definition states that aluminum recreational boats are intended by the manufacturer to be used primarily for pleasure and are built indoors in a production line manufacturing plant, rather than outdoors in a dry dock, graving dock, or on a marine railway.

The definitions of resins and gel coats have been revised to address pigmented resins and to clarify that pigmented resins are subject to the emission limitations for laminating resins. The definition of resin has been revised to indicate that resins include pigmented resins that are used to encapsulate and bind together reinforcement fibers. The definition of gel coat has been revised to indicate that a gel coat layer does not contain any reinforcing fibers, and gel coats are applied directly to mold surfaces or to a finished laminate.

V. Summary of Responses to Major Comments

This section presents a summary of significant public comments and responses. A summary of all the public comments that were received and EPA's responses to those comments can be found in Docket No. A–95–44.

A. Open Molding Operations

Comment: Several commenters requested exemptions or higher HAP content limits for several different specialty applications of resin and gel coat used in open molding operations.

One commenter requested an exemption that would allow them to comply with the production resin HAP content limit of 35 percent, but use atomizing equipment (rather than nonatomizing equipment) to apply up to 5 percent of total annual resin usage. Under the proposed NESHAP, a boat manufacturer must meet a production resin HAP content limit of 28 percent when using atomizing equipment, or comply by emission averaging if using a mix of atomizing and nonatomizing equipment.

A second commenter requested either a higher HAP content limit or an exemption for high-strength or heat-resistant resins. The commenter defined high-strength resins as those having a tensile strength greater than 10,000 pounds per square inch (psi) in clear cast form as measured by ASTM D638, and defined heat-resistant resins as those having a heat deflection temperature greater than 212 °F (100 °C) in clear cast form as measured by ASTM D648.

A third commenter requested that EPA either create a separate standard for, or include an exemption for, the use of backup gel coat. According to the commenter, backup gel coat is a black gel coat that is applied behind the white exterior gel coat to provide a dark background, against which air trapped in the wet laminate can be more easily detected and removed before the laminate hardens. The commenter reported they use a backup gel coat containing 44 percent HAP.

Response: The EPA recognizes that many boat manufacturers have situations in which they must use higher HAP materials for specialized purposes. In developing the NESHAP, we wanted to provide flexibility to deviate from the HAP content limits in these specialized situations. At the same time, it is impossible in the NESHAP to specifically accommodate all the situations in which a higher HAP material is needed. Attempting to do so could also limit flexibility if a particular situation requiring an exemption was overlooked and not accounted for in the NESHAP. Therefore, one of our objectives was to provide flexibility to use some higher HAP materials by adopting the averaging provisions and using weighted-average HAP contents in setting the MACT for each operation.

The averaging provisions allow each manufacturer to select a mix of resin and gel coat products that is best for their operation and to use higher HAP products based on their unique needs, as long as the emission limits are met. The plant-wide weighted-average HAP content used in determining MACT also accounts for the variation in HAP content among products used by a single manufacturer.

Because of the flexibility provided by the averaging options, the final NESHAP do not contain any of the three exemptions or higher HAP content limits requested by the commenters. Boat manufacturers that wish to apply some resin with atomizing equipment may use emissions averaging, rather than comply with the HAP content limit for atomized resin application operations.

The final standards do not exempt high-strength or heat-resistant resins from the HAP content limits. At least one vinylester resin being used by boat manufacturers meets both of the performance criteria suggested by the commenter and has an organic HAP content of 35 percent. (See Docket A–95–44). The resin has a tensile strength of 10,560 psi, and a heat deflection temperature of 228.6 °F. Therefore, boat manufacturers can still comply with the HAP content limits when using resins that must meet high-strength or heat-resistant specifications. Boat manufacturers that wish to continue to use their current materials may also average these resins with other open molding operations.

We do not believe an exemption or separate HAP content limit is needed for backup gel coats. According to the EPA database and observations made during site visits to various boat manufacturers, the majority of boat manufacturers do not use these backup gel coats. Those boat manufacturers that choose to use backup gel coats have the option of averaging these gel coats with other gel coats or resin application operations to demonstrate compliance.

Comment: Two commenters asked EPA to exempt or establish a HAP limit of 48 percent for production resin meeting military specifications, U.S. Coast Guard specifications for lifesaving equipment and small passenger vessels, Lloyd's Register (LR) certification criteria, American Bureau of Shipping (ABS) certification criteria, or other third party material performance specifications.

Response: The EPA database from which the NESHAP were developed represents almost exclusively recreational boat manufacturers. We have no data on resins used on boats built to military specifications or U.S. Coast Guard requirements. Therefore, production resins (including skin coat resins) are exempt from the production resin HAP content limits when those resins must meet military specifications or must be approved by the U.S. Coast Guard for use in life saving equipment and small passenger vessels. However, the final NESHAP do require that these resins be applied with nonatomized (non-spray) application equipment since nonatomized resin application does not affect resin performance.

Resins used on boats that are certified as meeting LR, ABS, or other third party standards will not be exempt from the HAP content limits for production resins. We have data indicating that laminates made with resins containing 35 percent styrene can meet both LR and ABS performance specifications. (*See* Docket A–95–44.)

Comment: Several commenters asked EPA to exempt 100 percent vinylester

skin coat resins from the HAP content limits, or establish a higher HAP content limit for skin coat resins. The commenters stated that skin coat resin, which is applied between the gel coat layer and the laminations on the bottom of the boat, is typically less than 5 percent of total production resin used. The commenters stated that low-HAP resins, including blended polyester-vinylester resins, do not offer the osmotic blister resistance of 100 percent vinylester skin coat resins with HAP contents of about 46 percent.

One commenter provided data to EPA comparing the blister resistance of pure vinylester resins to several blended polyester-vinylester resins in accelerated testing conditions. None of the blended resins had the same performance as the pure vinylester resins. According to the commenters, the pure vinylester resins are more expensive than the blended resins and are used only on larger boats that are intended to remain in the water continuously and that are removed only for periodic maintenance.

The commenters also concluded that using low-HAP skin coats could cause increased osmotic blistering to occur. Repairing osmotic blisters requires peeling or grinding the damaged gel coat and resin layers from the boat bottom and applying new resin and gel coat. These repairs result in additional styrene emissions and solid waste, thus offsetting the emission reduction benefits of low-HAP skin coats.

Response: We evaluated the test data submitted and agree with the conclusions of the commenters. The final rule exempts 100 percent vinylester resin used for skin coats from the production resin HAP content requirements. The resins eligible for the exemption will be limited to a maximum of 5 percent of the total resin used at each facility using the exemption. A facility using the exemption will need to maintain records of the amount of resin included in the exemption. This 5 percent cap is consistent with the amount of 100 percent vinylester resin used at the commenters' facilities.

This exemption for 100 percent vinylester skin coat resins is consistent with the results of the MACT analysis. The EPA database includes at least 13 boat manufacturers that are using skin coat resins with an organic HAP content of 35 percent or less. However, these are blended polyester-vinylester resins and are not pure vinylester resins. In addition, these blended resins are not used on boats in the size range on which the 100 percent vinylester resins are used. There are no facilities using a 100 percent vinylester resin with an organic HAP content of 35 percent.

B. Filled Tooling Resins

Comment: Several commenters requested that the HAP content of filled tooling resin be determined ''as applied'' rather than before the filler is added. Alternatively, the commenters suggested setting a separate MACT standard for filled tooling resins or exempting filled tooling resins from any HAP content limits. In the proposed NESHAP, the tooling resin HAP content limits were based on unfilled tooling resins. This approach would require operators to determine the HAP content of the tooling resin before the filler is added. According to the commenters, tooling resins to which filler will be added must have a higher HAP content to maintain a workable viscosity after the filler is added, but the HAP content is lowered substantially by the filler.

Response: The MACT floor for tooling resins was based on the use of a low-HAP, unfilled resin. Recently, more boat manufacturers have begun using filled tooling resins. We agree with the commenters that compliance for filled resins (both tooling and production) should be determined on an as-applied basis, rather than based on the HAP content of the neat (unfilled) resin before filler is added. However, because the emissions from filled and unfilled resins are different, compliance cannot be based on the HAP content of a filled resin. In a filled resin system, the percent of available styrene emitted is nearly the same as in the neat unfilled resin before the filler is added. In other words, if a filled resin and unfilled resin have the same HAP content on an as-applied basis, then the filled resin system will have higher HAP emissions than the unfilled resin because the filled resin has a higher styrene-to-resin polymer ratio. Therefore, filled resins must be compared to the MACT standard based on the MACT model point value (kilogram of HAP per megagram of filled resin applied (kg/Mg)). This approach accounts for differences in both HAP content and the amount of filler added.

A facility using a filled resin would calculate the MACT model point value for that resin based on the HAP content of the unfilled (neat) resin. The calculated MACT model point value would then be multiplied by the weight fraction of resin in the filled resin system to calculate the kg of HAP per Mg of filled resin applied. The final NESHAP contain procedures for calculating compliance for filled resins on an as-applied basis.

C. Standards for Closed Molding Resin Operations

Comment: Several commenters encouraged EPA to allow averaging between open and closed molding operations in cases where closed molding replaced an existing open molding operation. The commenters also encouraged EPA to allow a facility to average open and closed molding at new sources, and at existing sources where the closed molding was part of an expansion that did not replace open molding capacity. The commenters argued that allowing more averaging would encourage the development of closed molding technology that would further reduce HAP emissions.

Response: In the preamble to the proposed NESHAP, we solicited comments on the feasibility of allowing emissions averaging between open and closed molding operations in cases where the closed molding was considered a replacement for existing open molding operations. We received no comments that supported the legal feasibility of such averaging. We have decided that in the final NESHAP, closed molding operations will not be included in any averaging compliance options for either new or existing sources.

For the proposed NESHAP, we considered two options in determining MACT for open and closed molding operations. First, we considered determining MACT for all molding operations combined, including both open and closed molding. Although open and closed molding are different production processes, in this option we considered closed molding to be simply a very good emission control technique for open molding. Under this option, MACT limits would be set based on using a mix of open and closed molding. To comply, a facility could offset excess emissions from its open molding operations by using emission ''credits'' generated by using a greater fraction of closed molding operations than required by the standard. However, determining MACT by this method would result in a standard for existing sources that would be difficult, if not impossible, to achieve by sources that use only open molding. Also, MACT for new sources would be nearly 100 percent closed molding, which may not be achievable by most new sources. For these reasons, we did not determine MACT on a combined basis in the proposed NESHAP.

The second option we considered for determining MACT (and the one we proposed) was to treat open and closed molding as separate processes with

separate standards. Industry agreed with this position. We considered allowing emissions averaging under this option, but decided that averaging would provide little, if any, advantage. We have insufficient data for establishing MACT model point values for the different closed molding technologies. These MACT model point values would be needed to compute emission reductions for ''over controlling'' the closed molding operations. Even if such point values were established, it is unlikely that a source could achieve substantial reductions beyond the closed molding standard since closed molding operations emit so little.

We concluded, therefore, that emissions averaging at new and existing sources as requested by the commenters is not feasible. One method of allowing averaging would provide very little benefit and the other method would create an unreasonably stringent standard for sources that choose not to comply by emissions averaging.

Although we are not allowing emissions averaging between open and closed molding, we do encourage the use of closed molding because of its low-emitting nature. Even in the absence of averaging, we believe that there can be other benefits of using closed molding, such as minimized worker exposure, less recordkeeping and reporting, and the operational flexibility to use materials with any HAP content desired.

D. Standards for Aluminum Recreational Boat Surface Coating Operations

Comment: Two commenters requested that the MACT floor for aluminum recreational boat wipedown solvents be recalculated using the total volume of coating solids (primers, clear coats, and top coats) as a surrogate for the surface area to be cleaned. The commenters argued that the format of the NESHAP for aluminum recreational boat wipedown solvents is inappropriate because it uses the solids volume from the first coat (aluminum primers and clear coats applied to bare aluminum) as a surrogate for the surface area of the boat being cleaned prior to coating. According to the commenters, the use of the first coat solids volume is significantly more variable and biases the standard in favor of higher-solids primers. Therefore, the limit may not be achievable by facilities using lower-solids primers. According to the commenters, using the total volume of coating solids as a surrogate for surface area to be cleaned is more appropriate since the dry film thickness of the complete system is generally more uniform than that of primers and clear coats.

The commenters also asked EPA to allow facilities to average emissions between aluminum recreational boat surface preparation and coating operations by adopting a single HAP content limit for the combined operations. The commenters argued that this flexibility would help manufacturers meet the aluminum wipedown solvent and coating operation standards. They also noted that surface preparation, primers, and topcoats are often parts of a single coating system. The commenters estimated that the MACT floor based on combined emissions calculated at each facility would be equal to 1.87 kg HAP per liter of coating solids.

Response: We agree with the commenters that the total volume solids of primers, clear coats, and top coats is a better surrogate for total surface area than the volume solids of primer and clear coats applied to bare aluminum. We originally used primers and clear coats as a surrogate to reduce bias introduced by facilities that use more than a single color and apply multiple layers in the top coats. However, as noted by the commenters, the bias introduced by multiple top coat layers is less than the bias introduced by variability in the solids content of primers and clear coats.

To develop the combined emission limit, we have calculated the mass of HAP from aluminum wipedown solvents consumed per volume of total coating solids for the aluminum recreational boat manufacturing facilities in the EPA database. Based on this format, the MACT floor facility has a weighted-average HAP consumption rate of 0.33 kg organic HAP per liter of coating solids, including primers, clear coats, and topcoats.

We agree that allowing averaging or complying with a single HAP emission limit for these combined operations will provide greater flexibility and simplify compliance for boat manufacturers. In the final NESHAP, boat manufacturers may comply with either a single limit for combined operations or individual limits for wipedown solvents and coatings.

The combined HAP content limit for wipedown solvents and surface coating operations was derived as the sum of the separate limits for wipedown solvents and aluminum coatings. The limit for wipedown solvents is 0.33 kg organic HAP per liter coating solids and for aluminum coatings is 1.22 kg organic HAP per liter of coating solids. The combined limit is 1.55 kg organic HAP per liter of coating solids. This combined limit is more stringent than the limit estimated by the commenters (1.87 kg organic HAP per liter coating solids) because we performed separate MACT analyses for wipedown solvents and aluminum coatings. We performed separate analyses, rather than a MACT analysis for the combined emissions at each facility, because we disagree that the wipedown solvent is part of a coating system. We reviewed the data on coatings and aluminum wipedown solvents and noted that different boat manufacturers using the same coating system from the same supplier often used different aluminum wipedown solvents.

E. Methods for Determining Hazardous Air Pollutant Content

Comment: Several commenters asked EPA to clarify that compliance with the HAP content limits for gel coat is based only on organic HAP content and should not include inorganic HAP included as metal pigments because these metal pigments are not emitted during application or curing.

Response: We did not consider metal pigments in determining the HAP content limits for gel coats, and we agree that they are not emitted from the gel coat operations. Therefore, § 63.5758 of the final rule clarifies that HAP content includes organic HAP only and does not include inorganic HAP.

Comment: One commenter asked EPA to allow the use of less expensive methods ASTM D1644–88 (Standard Test Method for Nonvolatile Content of Varnishes) and ASTM D1259–85 (Standard Test Method for Nonvolatile Content of Resins), in addition to EPA Method 311, to demonstrate compliance with HAP content limits. The ASTM methods do not directly measure the HAP content and instead measure volatile organic matter.

Response: We agree that facility owners and operators should be allowed to demonstrate compliance with the HAP content limits using the ASTM D1259–85, but we do not see the utility of ASTM D1644–88. We are not regulating varnishes, and we are allowing in the final NESHAP the use of ASTM D1259–85 for resins and gelcoats and EPA Method 24 for coatings, which are weight-loss methods similar to ASTM D1644–88. We are allowing the use of ASTM D1259–85 because it tends to overestimate HAP content, compared to EPA Method 311, since it measures all volatile species and not just HAP. Likewise, the final NESHAP also allow the use of EPA Method 24 to measure volatile organic compound content as a surrogate for HAP.

Comment: One commenter asked that EPA ensure that the MACT standards reflect the high end of the HAP content ranges reported in the MSDS collected by EPA through the industry survey. In addition, if an MSDS offered a single HAP content value, the commenter asked EPA to ensure that the manufacturer did not allow the value to fluctuate above the value reported in the MSDS. For example, an MSDS provided by the commenters for a production gel coat reports the combined styrene and MMA content is 36.4 percent, but notes that these values are target formula values and ''actual batch concentrations will vary within limits consistent with separately established product specifications.''

Response: In selecting the HAP content limits for all operations regulated by the proposed NESHAP, we always used the upper limit of the range for reported HAP content values. Therefore, we are confident that the proposed HAP content limits are achievable.

However, we agree that some material manufacturers and suppliers report on their MSDS the ''target'' value for a constituent and actual values may vary from the target value by plus or minus 2 percentage points. Since the standards are based on these same data, the standards should account for this variation between actual and reported values. Therefore, § 63.5758 of the final NESHAP includes a provision that if a HAP content measured using the methods specified in the NESHAP is within 2 percentage points of the reported target value, you may use the reported value for demonstrating compliance. Otherwise, you must use the measured value to demonstrate compliance.

F. Notifications, Reports, and Records

Comment: Several commenters asked EPA to allow compliance with the standards to be demonstrated based on a 12-month rolling average instead of a 3-month rolling average. They argued that this is consistent with the typical recordkeeping and reporting obligations in most title V permits. In addition, many facilities experience seasonal variations in production and mold construction that may require them to use higher HAP materials for several months at a time. A 3-month averaging period would not allow them to offset these higher emissions with lower emissions during the rest of the year.

Response: We agree with the commenters, and the final NESHAP allow compliance to be demonstrated on a 12-month rolling average basis, rather than a 3-month rolling average basis for sources that are not using an add-on control device. For sources using an add-on control device, compliance is based on continuous parameter monitoring.

G. Pollution Prevention

Comment: One commenter asked EPA to include provisions by which a facility already subject to the rule could become exempt by employing pollution prevention measures that are at least equivalent to MACT and that make the source physically incapable of being a major source. According to the commenter, EPA policy is that a source that is a major source on the compliance date for a rule is always subject to a rule, even if it adopts process changes or pollution prevention strategies that make it physically impossible to emit at greater than the major source threshold. According to the commenter, EPA's ''once in, always in'' policy discourages facilities from adopting pollution prevention strategies that could achieve significant emission reductions.

Response: The EPA, through discussion with State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials, has reached a tentative solution that will require changes in the NESHAP General Provisions (40 CFR part 63, subpart A) or individual MACT rules, rather than a change in the EPA policy on ''Once-In-Always-In.'' (See the May 16, 1995 memorandum on ''Potential to Emit'' from John Seitz to the EPA Regional Administrators, available on the World Wide Web at http://www.epa.gov/ttn/oarpg.) We have been working to develop regulatory options that would allow qualifying sources to satisfy the MACT requirements through innovative, streamlined approaches, if, after a source achieves compliance with an applicable MACT rule, they achieve HAP emission reductions equivalent to or better than MACT levels of control through pollution prevention measures. The regulatory options under consideration for the final solution will include components that meet the legal requirements of the CAA and still resolve the issues regarding pollution prevention. Once we reach a final solution, we plan to develop rule language to propose to amend either the NESHAP General Provisions or existing MACT rules. We project proposing these amendments later in 2001.

VI. Administrative Requirements

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), we must determine whether a final regulatory action is ''significant'' and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

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

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

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and 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, it has been determined that today's final rule is not a ''significant regulatory action'' because it will not have an annual effect on the economy of $100 million or more and is therefore not subject to OMB review.

B. Executive Order 13132, Federalism

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include 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.'' Under Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the rule. The EPA

also may not issue a regulation that has federalism implications and that preempts State law unless the Agency consults with State and local officials early in the process of developing the rule.

If EPA complies by consulting, Executive Order 13132 requires EPA to provide to the OMB, in a separately identified section of the preamble to the rule, a federalism summary impact statement (FSIS). The FSIS must include a description of the extent of EPA's prior consultation with State and local officials, a summary of the nature of their concerns and EPA's position supporting the need to issue the regulation, and a statement of the extent to which the concerns of State and local officials have been met. Also, when EPA transmits a final rule with federalism implications to OMB for review pursuant to Executive Order 12866, EPA must include a certification from its federalism official stating that EPA has met the requirements of Executive Order 13132 in a meaningful and timely manner.

Today's final rule 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. No boat manufacturing facilities subject to the final rule are owned by State or local governments. Therefore, State and local governments will not have any direct compliance costs resulting from this final rule. Furthermore, EPA is directed to develop the final rule by section 112 of the CAA. Thus, the requirements of section 6 of the Executive Order do not apply to this final rule.

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

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.'' ''Policies that have tribal implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes.''

This 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, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to this rule.

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

Executive Order 13045, ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997) applies to any rule that: (1) is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, 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 EPA.

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. Today's final rule is not subject to Executive Order 13045 because it establishes an environmental standard based on technology, not health or safety risk. No children's risk analysis was performed because no alternative technologies exist that would provide greater stringency at a reasonable cost. Furthermore, today's final rule has been determined not to be ''economically significant'' as defined under Executive Order 12866.

E. Unfunded Mandates Reform Act of 1995

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

The EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of $100 million or more by State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. The total cost to the private sector is approximately $14 million per year. This final rule contains no mandates affecting State, local, or Tribal governments. Thus, today's final rule is not subject to the requirements of sections 202 and 205 of the UMRA.

We have determined that this final rule contains no regulatory requirements that might significantly or uniquely affect small governments because it contains no requirements that apply to such governments or impose obligations upon them.

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

The RFA generally requires us to give special consideration to the effect of Federal regulations on small entities and to consider regulatory options that might mitigate any such impacts. We must prepare a regulatory flexibility analysis unless we determine that the rule will not have a ''significant economic impact on a substantial number of small entities.'' Small entities

include small businesses, small organizations, and small governmental jurisdictions.

For the purposes of assessing the impacts of today's final rule on small entities, a small entity is defined as: (1) A small business whose parent company has fewer than 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; or (3) a small organization that is ''any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.''

We have determined that 66 out of the 2,307 small firms in the industry (2.9 percent) may be affected by this final rule. In a screening of impacts on these small firms, we found that 47 firms have costs that comprise less than 1 percent of firm revenues, and 19 firms have estimated compliance costs that exceed 1 percent of their revenues. Based on available data of industry profit margins, the average return on sales for the industry is 3.4 percent. Of the 19 firms with costs greater than 1 percent of revenues, only one firm is estimated to experience costs exceeding 3 percent of revenues. Thus, reviewing the range of costs to be borne by small businesses in light of the 3.4 percent profit margins typical of this industry, the Agency has determined the costs are typically small and, overall, do not constitute a significant impact on a substantial number of small businesses. In addition, this final rule is likely to also increase profits at the 2,241 small firms that are not affected by the final rule due to the very slight increase in market prices. The economic impacts are summarized in section III.G. of this document and in the economic impact analysis contained in Docket No. A–95–44.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA has tried to reduce the impact of this final rule on small entities. We have met with ten of these small firms and their trade association. They have been fully involved in this rulemaking, and their concerns have been considered in the development of this final rule. In developing these final standards, we have provided the maximum degree of flexibility to minimize impacts on small businesses by providing several different compliance options, several of which require a minimum amount of recordkeeping and reporting. Also, these final standards, which are based on MACT floor level control technology, reflect the minimum level of control allowed under the CAA. Small businesses that are subject to the final rule will not be systematically impacted more than larger operations.

Pursuant to the provisions of 5 U.S.C. 605(b), we have determined that this final rule will not have a significant economic impact on a substantial number of small entities.

G. Paperwork Reduction Act

The information collection requirements in today's final rule have been submitted for approval to the OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* An ICR document has been prepared by EPA (ICR No. 1966.02) and a copy may be obtained from Sandy Farmer by mail at the U.S. EPA, Office of Environmental Information, Collection Strategies Division (2822), 1200 Pennsylvania Avenue NW, Washington, DC 20460, by e-mail at farmer.sandy@epa.gov, or by calling (202) 260–2740. A copy may also be downloaded off the internet at http://www.epa.gov/icr. The information requirements are not effective until OMB approves them.

The final rule contains monitoring, reporting, and recordkeeping requirements. The required notices and reports are the minimum needed by us to determine who is subject to the NESHAP and whether you are in compliance. The final recordkeeping requirements are the minimum necessary to determine initial and ongoing compliance. Based on reported information, we would decide which boat manufacturers and what records or processes should be inspected. The recordkeeping and reporting requirements are consistent with the general provisions of 40 CFR part 63.

These recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to us for which a claim of confidentiality is made will be safeguarded according to our policies in 40 CFR part 2, subpart B.

The EPA expects the final rule to affect a total of 134 boat manufacturing facilities over the first 3 years. The EPA assumes that five new boat manufacturing facilities will become subject to the final rule during each of the first 3 years. The EPA expects 119 existing facilities to be affected by the final rule, and these existing facilities will begin complying in the third year.

The estimated average annual burden for the first 3 years after promulgation of the final rule for industry and the implementing agency is outlined below. You can find the details of this information collection in the ''Standard Form 83 Supporting Statement for ICR No. 1966.02,'' in Docket No. A–95–44.

Affected entity	Total hours	Labor costs	Capital costs	Operating and maintenance costs	Total costs
Industry	10,343	635,526	0	895	636,421
Implementing agency	2,456	141,073	0	0	141,073

The EPA estimates that there are no capital or startup costs for these new facilities because they are expected to comply by limiting the HAP content of materials. The implementing agency would not incur any capital or startup costs.

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

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15. When the OMB approves the information collection requirements of the final rule, the EPA will amend the table in 40 CFR part 9 of currently approved ICR control

numbers issued by OMB for various regulations.

H. National Technology Transfer and 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 the 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.

This rulemaking involves technical standards. The EPA cites the following standards in this rule: EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 18, 24, 25A, 204, and 311. Consistent with the NTTAA, EPA conducted searches to identify voluntary consensus standards in addition to these EPA methods. No applicable voluntary consensus standards were identified for EPA Methods 1A, 2A, 2D, 2F, 2G, 204, and 311. The search and review results have been documented and are placed in the docket (Docket No. A–95–44) for this rule.

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

We are also citing the voluntary consensus standard ASTM D1259–85, ''Standard Test Method for Nonvolatile Content of Resins,'' as an acceptable method to measure the volatile matter content of resins and gel coats for open molding operations, to be used as a substitute for organic HAP content.

Six voluntary consensus standards: ASTM D1475–90, ASTM D2369–95, ASTM D3792–91, ASTM D4017–96a, ASTM D4457–85 (Reapproved 91), and ASTM D5403–93 are already incorporated by reference in EPA Method 24. Five voluntary consensus standards: ASTM D1979–91, ASTM D3432–89, ASTM D4747–87, ASTM D4827–93, and ASTM PS9–94 are incorporated by reference in EPA Method 311. In addition, we are separately specifying the use of ASTM D1475–90, ''Standard Test Method for Density of Liquid Coatings, Inks, and Related Products,'' for measuring the average density of volatile matter in the coating.

The voluntary 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 this rule in addition to EPA Method 18 codified at 40 CFR part 60, appendix A.

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 is a suitable alternative to Method 18 only where: (1) the target compound(s) are those listed in Section 1.1 of ASTM D6420–99, and (2) the target concentration is between 150 parts per billion by volume and 100 parts per million by volume.

For target compound(s) not listed in Table 1.1 of ASTM D6420–99, but potentially detected by mass spectrometry, the rule 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 Table 1.1 of ASTM D6420–99, and not amenable to detection by mass spectrometry, ASTM D6420–99 does not apply.

In addition to the voluntary consensus standards EPA will use in this rule, the search for emissions measurement procedures identified 12 other voluntary consensus standards. The EPA determined that nine of these 12 standards identified for measuring emissions of the HAP or surrogates subject to emission standards in this rule were impractical alternatives to EPA test methods for the purposes of this rule. Therefore, the EPA does not intend to adopt these standards.

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

Sections 63.5719 and 63.5758 to subpart VVVV list the EPA testing methods included in the rule. Under § 63.8, a source may apply to EPA for permission to use alternative monitoring in place of any of the EPA testing methods.

I. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the SBREFA, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this final rule and other required information to the U.S. Senate, the U.S. House or Representatives, and the Comptroller General of the United States, prior to publication of the final rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2), and therefore, will be effective on August 22, 2001.

J. Executive Order 13211 (Energy Effects)

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

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Hazardous air pollutants, Incorporation by reference, Reporting and recordkeeping

requirements, Volatile organic compounds.

Dated: August 14, 2001.

Christine Todd Whitman,

Administrator.

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

PART 63—[AMENDED]

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

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

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

Subpart VVVV—National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing

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What the Subpart Covers

§ 63.5680 What is the purpose of this subpart?

(a) This subpart establishes national emission standards for hazardous air pollutants (HAP) for new and existing boat manufacturing facilities with resin and gel coat operations, carpet and fabric adhesive operations, or aluminum recreational boat surface coating operations. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission standards.

§ 63.5683 Does this subpart apply to me?

(a) This subpart applies to you if you meet both of the criteria listed in paragraphs (a)(1) and (2) of this section.

(1) You are the owner or operator of a boat manufacturing facility that builds fiberglass boats or aluminum recreational boats.

(2) Your boat manufacturing facility is a major source of HAP either in and of itself, or because it is collocated with other sources of HAP, such that all sources combined constitute a major source.

(b) A boat manufacturing facility is a facility that manufactures hulls or decks of boats from fiberglass or aluminum, or assembles boats from premanufactured hulls and decks, or builds molds to make fiberglass hulls or decks. A facility that manufactures only parts of boats (such as hatches, seats, or lockers) or boat trailers is not considered a boat manufacturing facility for the purpose of this subpart.

(c) A major source is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or can potentially emit, considering controls, in the aggregate, 9.1 megagrams (10 tons) or more per year of a single HAP or 22.7 megagrams (25 tons) or more per year of a combination of HAP.

(d) This subpart does not apply to aluminum coating operations on aluminum boats intended for commercial or military (nonrecreational) use, antifoulant coatings, assembly adhesives, fiberglass hull and deck coatings, research and development activities, mold sealing and release agents, mold stripping and cleaning solvents, and wood coatings as defined in § 63.5779. This subpart does not apply to materials contained in handheld aerosol cans.

§ 63.5686 How do I demonstrate that my facility is not a major source?

You can demonstrate that your facility is not a major source by using the procedures in either paragraph (a) or (b) of this section.

(a) *Emission option.* You must demonstrate that your facility does not emit, and does not have the potential to emit as defined in § 63.2, considering federally enforceable permit limits, 9.1 megagrams (10 tons) or more per year of a single HAP or 22.7 megagrams (25 tons) or more per year of a combination of HAP. To calculate your facility's potential to emit, you must include emissions from the boat manufacturing facility and all other sources that are collocated and under common ownership or control with the boat manufacturing facility.

(b) *Material consumption option.* This option can be used if you manufacture either fiberglass boats or aluminum recreational boats at your facility. You must meet the criteria in paragraph (b)(1), (2), or (3) of this section and comply with the requirements in paragraph (c) of this section. If you initially rely on the limits and criteria specified in paragraph (b)(1), (2), or (3) of this section to become an area source, but then exceed the relevant limit (without first obtaining and complying with other limits that keep your potential to emit HAP below major source levels), your facility will then become a major source, and you must comply with all applicable provisions of this subpart beginning on the compliance date specified in § 63.5695. Nothing in this paragraph is intended to preclude you from limiting your facility's potential to emit through other federally enforceable mechanisms available through your permitting authority.

(1) If your facility is primarily a fiberglass boat manufacturing facility, you must demonstrate that you consume less than 45.4 megagrams per rolling 12-month period of all combined polyester- and vinylester-based resins and gel coats (including tooling and production resins and gel coats, and clear gel coats), and you must demonstrate that at least 90 percent of total annual HAP emissions at the facility (including emissions from aluminum recreational boat manufacturing or other source categories) originate from the fiberglass boat manufacturing materials.

(2) If your facility is primarily an aluminum recreational boat manufacturing facility, you must demonstrate that it consumes less than 18.2 megagrams per rolling 12-month period of all combined surface coatings, aluminum wipedown solvents, application gun cleaning solvents, and carpet and fabric adhesives; and you must demonstrate that at least 90 percent of total annual HAP emissions at the facility (including emissions from fiberglass boat manufacturing or other source categories) originate from the aluminum recreational boat manufacturing materials.

(3) If your facility is a fiberglass boat or an aluminum recreational boat manufacturing facility, you must demonstrate that the boat manufacturing materials consumed per rolling 12-month period contain a total of less than 4.6 megagrams of any single HAP and less than 11.4 megagrams of all combined HAP, and you must demonstrate that at least 90 percent of total annual HAP emissions at the facility (including emissions from other source categories) originate from these boat manufacturing materials.

(c) If you use the material consumption option described in paragraph (b) of this section to demonstrate that you are not a major source, you must comply with the requirements of paragraphs (c)(1) through (3) of this section.

(1) If your facility has HAP emissions that do not originate from boat manufacturing operations or materials described in paragraph (b), then you must keep any records necessary to demonstrate that the 90 percent criterion is met.

(2) A rolling 12-month period includes the previous 12 months of operation. You must maintain records of the total amount of materials described in paragraph (b) of this section used each month, and, if necessary, the HAP content of each material and the calculation of the total HAP consumed each month. Because records are needed for a 12-month period, you must keep records beginning no later than 12 months before the compliance date specified in § 63.5695. Records must be kept for 5 years after they are created.

(3) In determining whether the 90 percent criterion included in paragraph (b) of this section is met, you do not need to include materials used in routine janitorial, building, or facility grounds maintenance; personal uses by employees or other persons; or products used for maintaining motor vehicles operated by the facility.

§ 63.5689 What parts of my facility are covered by this subpart?

The affected source (the portion of your boat manufacturing facility covered by this subpart) is the combination of all of the boat manufacturing operations listed in paragraphs (a) through (f) of this section.

(a) Open molding resin and gel coat operations (including pigmented gel coat, clear gel coat, production resin, tooling gel coat, and tooling resin).

(b) Closed molding resin operations.

(c) Resin and gel coat mixing operations.

(d) Resin and gel coat application equipment cleaning operations.

(e) Carpet and fabric adhesive operations.

(f) Aluminum hull and deck coating operations, including solvent wipedown operations and paint spray gun cleaning operations, on aluminum recreational boats.

§ 63.5692 How do I know if my boat manufacturing facility is a new source or an existing source?

(a) A boat manufacturing facility is a new source if it meets the criteria in paragraphs (a)(1) through (3) of this section.

(1) You commence construction of the affected source after July 14, 2000.

(2) It is a major source.

(3) It is a completely new boat manufacturing affected source where no other boat manufacturing affected source existed prior to the construction of the new source.

(b) For the purposes of this subpart, an existing source is any source that is not a new source.

§ 63.5695 When must I comply with this subpart?

You must comply with the standards in this subpart by the compliance dates specified in Table 1 to this subpart.

Standards for Open Molding Resin and Gel Coat Operations

§ 63.5698 What emission limit must I meet for open molding resin and gel coat operations?

(a) You must limit organic HAP emissions from the five open molding operations listed in paragraphs (a)(1) through (5) of this section to the emission limit specified in paragraph (b) of this section. Operations listed in paragraph (d) are exempt from this limit.

(1) Production resin.

(2) Pigmented gel coat.
(3) Clear gel coat.
(4) Tooling resin.
(5) Tooling gel coat.

(b) You must limit organic HAP emissions from open molding operations to the limit specified by equation 1 of this section, based on a 12-month rolling average.

$$\text{HAP Limit} = \left[46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG})\right] \quad \text{(Eq. 1)}$$

Where:

HAP Limit= total allowable organic HAP that can be emitted from the open molding operations, kilograms.

M_R = mass of production resin used in the past 12 months, excluding any materials exempt under paragraph (d) of this section, megagrams.

M_{PG} = mass of pigmented gel coat used in the past 12 months, excluding any materials exempt under paragraph (d) of this section, megagrams.

M_{CG} = mass of clear gel coat used in the past 12 months, excluding any materials exempt under paragraph (d) of this section, megagrams.

M_{TR} = mass of tooling resin used in the past 12 months, excluding any materials exempt under paragraph (d) of this section, megagrams.

M_{TG} = mass of tooling gel coat used in the past 12 months, excluding any materials exempt under paragraph (d) of this section, megagrams.

(c) The open molding emission limit is the same for both new and existing sources.

(d) The materials specified in paragraphs (d)(1) through (3) of this section are exempt from the open molding emission limit specified in paragraph (b) of this section.

(1) Production resins (including skin coat resins) that must meet specifications for use in military vessels or must be approved by the U.S. Coast Guard for use in the construction of lifeboats, rescue boats, and other life-saving appliances approved under 46 CFR subchapter Q or the construction of small passenger vessels regulated by 46 CFR subchapter T. Production resins for which this exemption is used must be applied with nonatomizing (non-spray) resin application equipment. You must keep a record of the resins for which you are using this exemption.

(2) Pigmented, clear, and tooling gel coat used for part or mold repair and touch up. The total gel coat materials included in this exemption must not exceed 1 percent by weight of all gel coat used at your facility on a 12-month rolling-average basis. You must keep a record of the amount of gel coats used per month for which you are using this exemption and copies of calculations showing that the exempt amount does not exceed 1 percent of all gel coat used.

(3) Pure, 100 percent vinylester resin used for skin coats. This exemption does not apply to blends of vinylester and polyester resins used for skin coats. The total resin materials included in the exemption cannot exceed 5 percent by weight of all resin used at your facility on a 12-month rolling-average basis. You must keep a record of the amount of 100 percent vinylester skin coat resin used per month that is eligible for this exemption and copies of calculations showing that the exempt amount does not exceed 5 percent of all resin used.

§ 63.5701 What are my options for complying with the open molding emission limit?

You must use one or more of the options listed in paragraphs (a) through (c) of this section to meet the emission limit in § 63.5698 for the resins and gel coats used in open molding operations at your facility.

(a) *Maximum achievable control technology (MACT) model point value averaging (emissions averaging) option.*

(1) Demonstrate that emissions from the open molding resin and gel coat operations that you average meet the emission limit in § 63.5698 using the procedures described in § 63.5710. Compliance with this option is based on a 12-month rolling average.

(2) Those operations and materials not included in the emissions average must comply with either paragraph (b) or (c) of this section.

(b) *Compliant materials option.* Demonstrate compliance by using resins and gel coats that meet the organic HAP content requirements in Table 2 to this subpart. Compliance with this option is based on a 12-month rolling average.

(c) *Add-on control option.* Use an enclosure and add-on control device, and demonstrate that the resulting emissions meet the emission limit in § 63.5698. Compliance with this option is based on control device performance testing and control device monitoring.

§ 63.5704 What are the general requirements for complying with the open molding emission limit?

(a) *Emissions averaging option.* For those open molding operations and materials complying using the emissions averaging option, you must demonstrate compliance by performing the steps in paragraphs (a)(1) through (5) of this section.

(1) Use the methods specified in § 63.5758 to determine the organic HAP content of resins and gel coats.

(2) Complete the calculations described in § 63.5710 to show that the organic HAP emissions do not exceed the limit specified in § 63.5698.

(3) Keep records as specified in paragraphs (a)(3)(i) through (iv) of this section for each resin and gel coat.

(i) Hazardous air pollutant content.

(ii) Amount of material used per month.

(iii) Application method used for production resin and tooling resin. This record is not required if all production resins and tooling resins are applied with nonatomized technology.

(iv) Calculations performed to demonstrate compliance based on MACT model point values, as described in § 63.5710.

(4) Prepare and submit the implementation plan described in § 63.5707 to the Administrator and keep it up to date.

(5) Submit semiannual compliance reports to the Administrator as specified in § 63.5764.

(b) *Compliant materials option.* For each open molding operation complying using the compliant materials option, you must demonstrate compliance by performing the steps in paragraphs (b)(1) through (4) of this section.

(1) Use the methods specified in § 63.5758 to determine the organic HAP content of resins and gel coats.

(2) Complete the calculations described in § 63.5713 to show that the weighted-average organic HAP content does not exceed the limit specified in Table 2 to this subpart.

(3) Keep records as specified in paragraphs (b)(3)(i) through (iv) of this section for each resin and gel coat.

(i) Hazardous air pollutant content.

(ii) Application method for production resin and tooling resin. This record is not required if all production resins and tooling resins are applied with nonatomized technology.

(iii) Amount of material used per month. This record is not required for an operation if all materials used for that operation comply with the organic HAP content requirements.

(iv) Calculations performed, if required, to demonstrate compliance based on weighted-average organic HAP content as described in § 63.5713.

(4) Submit semiannual compliance reports to the Administrator as specified in § 63.5764.

(c) *Add-on control option.* If you are using an add-on control device, you must demonstrate compliance by performing the steps in paragraphs (c)(1) through (5) of this section.

(1) Conduct a performance test of the control device as specified in §§ 63.5719 and 63.5722 to demonstrate initial compliance.

(2) Use the performance test results to determine control device parameters to monitor after the performance test as specified in § 63.5725.

(3) Comply with the operating limits specified in § 63.5715 and the control device and emission capture system monitoring requirements specified in § 63.5725 to demonstrate continuous compliance.

(4) Keep the records specified in § 63.5767.

(5) Submit to the Administrator the notifications and reports specified in §§ 63.5761 and 63.5764.

§ 63.5707 What is an implementation plan for open molding operations and when do I need to prepare one?

(a) You must prepare an implementation plan for all open molding operations for which you comply by using the emissions averaging option described in § 63.5704(a).

(b) The implementation plan must describe the steps you will take to bring the open molding operations covered by this subpart into compliance. For each operation included in the emissions average, your implementation plan must include the elements listed in paragraphs (b)(1) through (3) of this section.

(1) A description of each operation included in the average.

(2) The maximum organic HAP content of the materials used, the application method used (if any atomized resin application methods are used in the average), and any other methods used to control emissions.

(3) Calculations showing that the operations covered by the plan will comply with the open molding emission limit specified in § 63.5698.

(c) You must submit the implementation plan to the Administrator with the notification of compliance status specified in § 63.5761.

(d) You must keep the implementation plan on site and provide it to the Administrator when asked.

(e) If you revise the implementation plan, you must submit the revised plan with your next semiannual compliance report specified in § 63.5764.

§ 63.5710 How do I demonstrate compliance using emissions averaging?

(a) Compliance using the emissions averaging option is demonstrated on a 12-month rolling-average basis and is determined at the end of every month (12 times per year). The first 12-month rolling-average period begins on the compliance date specified in § 63.5695.

(b) At the end of the twelfth month after your compliance date and at the end of every subsequent month, use equation 1 of this section to demonstrate that the organic HAP emissions from those operations included in the average do not exceed the emission limit in § 63.5698 calculated for the same 12-month period. (Include terms in equation 1 of § 63.5698 and equation 1 of this section for only those operations and materials included in the average.)

$$\text{HAP emissions} = \left[(PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG})\right] \qquad \text{(Eq. 1)}$$

Where:

HAP emissions= Organic HAP emissions calculated using MACT model point values for each operation included in the average, kilograms.

PV_R= Weighted-average MACT model point value for production resin used in the past 12 months, kilograms per megagram.

M_R= Mass of production resin used in the past 12 months, megagrams.

PV_{PG}= Weighted-average MACT model point value for pigmented gel coat used in the past 12 months, kilograms per megagram.

M_{PG}= Mass of pigmented gel coat used in the past 12 months, megagrams.

PV_{CG}= Weighted-average MACT model point value for clear gel coat used in the past 12 months, kilograms per megagram.

M_{CG}= Mass of clear gel coat used in the past 12 months, megagrams.

PV_{TR}= Weighted-average MACT model point value for tooling resin used in the past 12 months, kilograms per megagram.

M_{TR}= Mass of tooling resin used in the past 12 months, megagrams.

PV_{TG}= Weighted-average MACT model point value for tooling gel coat used in the past 12 months, kilograms per megagram.

M_{TG}= Mass of tooling gel coat used in the past 12 months, megagrams.

(c) At the end of every month, use equation 2 of this section to compute the weighted-average MACT model point value for each open molding resin and gel coat operation included in the average.

$$PV_{OP} = \frac{\sum_{i=1}^{n}(M_i\ PV_i)}{\sum_{i=1}^{n}(M_i)} \qquad \text{(Eq. 2)}$$

Where:

PV_{OP}=weighted-average MACT model point value for each open molding operation (PV_R, PV_{PG}, PV_{CG}, $PVPV_{TR}$, and $PVPV_{TG}$) included in the average, kilograms of HAP per megagram of material applied.

M_i=mass of resin or gel coat i used within an operation in the past 12 months, megagrams.

n=number of different open molding resins and gel coats used within an operation in the past 12 months.

PV_i=the MACT model point value for resin or gel coat i used within an operation in the past 12 months, kilograms of HAP per megagram of material applied.

(d) You must use the equations in Table 3 to this subpart to calculate the MACT model point value (PV_i) for each resin and gel coat used in each operation in the past 12 months.

(e) If the organic HAP emissions, as calculated in paragraph (b) of this section, are less than the organic HAP limit calculated in § 63.5698(b) for the same 12-month period, then you are in compliance with the emission limit in § 63.5698 for those operations and materials included in the average.

§ 63.5713 How do I demonstrate compliance using compliant materials?

(a) Compliance using the organic HAP content requirements listed in Table 2 to this subpart is based on a 12-month rolling average that is calculated at the end of every month. The first 12-month rolling-average period begins on the compliance date specified in § 63.5695.

If you are using filled material (production resin or tooling resin), you must comply according to the procedure described in § 63.5714.

(b) At the end of the twelfth month after your compliance date and at the end of every subsequent month, review the organic HAP contents of the resins and gel coats used in the past 12 months in each operation. If all resins and gel coats used in an operation have organic HAP contents no greater than the applicable organic HAP content limits in Table 2 to this subpart, then you are in compliance with the emission limit specified in § 63.5698 for that 12-month period for that operation. In addition, you do not need to complete the weighted-average organic HAP content calculation contained in paragraph (c) of this section for that operation.

(c) At the end of every month, you must use equation 1 of this section to calculate the weighted-average organic HAP content for all resins and gel coats used in each operation in the past 12 months.

$$\text{Weighted-Average HAP Content (\%)} = \frac{\sum_{i=1}^{n}(M_i\ HAP_i)}{\sum_{i=1}^{n}(M_i)} \qquad \text{(Eq. 1)}$$

Where:

M_i = mass of open molding resin or gel coat i used in the past 12 months in an operation, megagrams.

HAP_i = Organic HAP content, by weight percent, of open molding resin or gel coat i used in the past 12 months in an operation. Use the methods in § 63.5758 to determine organic HAP content.

n = number of different open molding resins or gel coats used in the past 12 months in an operation.

(d) If the weighted-average organic HAP content does not exceed the applicable organic HAP content limit specified in Table 2 to this subpart, then you are in compliance with the emission limit specified in § 63.5698.

§ 63.5714 How do I demonstrate compliance if I use filled resins?

(a) If you are using a filled production resin or filled tooling resin, you must demonstrate compliance for the filled material on an as-applied basis using equation 1 of this section.

$$PV_F = PV_u \times \frac{(100 - \%\ \text{Filler})}{100} \qquad \text{(Eq. 1)}$$

Where:

PV_F = The as-applied MACT model point value for a filled production resin or tooling resin, kilograms organic HAP per megagram of filled material.

PV_u = The MACT model point value for the neat (unfilled) resin, before filler is added, as calculated using the formulas in Table 3 to this subpart.

% Filler =The weight-percent of filler in the as-applied filled resin system.

(b) If the filled resin is used as a production resin and the value of PV_F calculated by equation 1 of this section does not exceed 46 kilograms of organic HAP per megagram of filled resin applied, then the filled resin is in compliance.

(c) If the filled resin is used as a tooling resin and the value of PV_F calculated by equation 1 of this section does not exceed 54 kilograms of organic HAP per megagram of filled resin applied, then the filled resin is in compliance.

(d) If you are including a filled resin in the emissions averaging procedure described in § 63.5710, then use the value of PV_F calculated using equation 1 of this section for the value of PV i in equation 2 of § 63.5710.

Demonstrating Compliance for Open Molding Operations Controlled by Add-On Control Devices

§ 63.5715 What operating limits must I meet?

(a) For open molding operations on which you use a thermal oxidizer as an add-on control device, you must meet the operating limits specified in Table 4 to this subpart that apply to the emission capture system and thermal oxidizer. You must establish the operating limits during the performance test according to the procedures in § 63.5725. You must meet the operating limits at all times after you establish them.

(b) If you use an add-on control device other than a thermal oxidizer, or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of alternative monitoring under § 63.8(f).

§ 63.5716 When must I conduct a performance test?

(a) If your source is an existing source, you must complete the add-on control device performance test no later than the compliance date specified in § 63.5695.

(b) If your source is a new source, you must complete the add-on control device performance test no later than 180 days after the compliance date specified in § 63.5695.

(c) You must conduct a performance test every 5 years as part of renewing your 40 CFR part 70 or 71 operating permit.

§ 63.5719 How do I conduct a performance test?

(a) You must capture the emissions using a permanent enclosure (such as a spray booth or similar containment device) and direct the captured emissions to the add-on control device.

(b) You must measure emissions as specified in paragraph (b)(1) or (2) of this section.

(1) If the enclosure vented to the control device is a permanent total enclosure as defined in Method 204 of appendix M to 40 CFR part 51, then you may measure emissions only at the outlet of the control device.

(2) If the permanent enclosure vented to the control device is not a total enclosure, you must build a temporary total enclosure, as defined in Method 204 of appendix M to 40 CFR part 51, around the permanent enclosure. You must then simultaneously measure emissions from the control device outlet and the emissions from the temporary total enclosure outlet. You determine compliance from the combined emissions from the control device outlet and the temporary total enclosure outlet.

(c) You must conduct the control device performance test using the emission measurement methods specified in paragraphs (c)(1) through (4) of this section.

(1) Use either Method 1 or 1A of appendix A to 40 CFR part 60, as appropriate, to select the sampling sites.

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

(3) Use Method 18 of appendix A to 40 CFR part 60 to measure organic HAP emissions or use Method 25A of appendix A to 40 CFR part 60 to measure total gaseous organic emissions as a surrogate for total organic HAP emissions. If you use Method 25A, you must assume that all gaseous organic emissions measured as carbon are organic HAP emissions. If you use Method 18 and the number of organic HAP in the exhaust stream exceeds five, you must take into account the use of multiple chromatographic columns and analytical techniques to get an accurate measure of at least 90 percent of the total organic HAP mass emissions. Do not use Method 18 to measure organic HAP emissions from a combustion device; use instead Method 25A and assume that all gaseous organic mass emissions measured as carbon are organic HAP emissions.

(4) You may use American Society for Testing and Materials (ASTM) D6420–99 (available for purchase from at least one of the following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.) in lieu of Method 18 of 40 CFR part 60, appendix A, under the conditions specified in paragraphs (c)(4)(i) through (iii) of this section.

(i) If the target compound(s) is listed in Section 1.1 of ASTM D6420–99 and the target concentration is between 150 parts per billion by volume and 100 parts per million by volume.

(ii) If the target compound(s) is not listed in Section 1.1 of ASTM D6420–99, but is potentially detected by mass spectrometry, an additional system continuing calibration check after each run, as detailed in Section 10.5.3 of ASTM D6420–99, must be followed, met, documented, and submitted with the performance test report even if you do not use a moisture condenser or the compound is not considered soluble.

(iii) If a minimum of one sample/analysis cycle is completed at least every 15 minutes.

(d) The control device performance test must consist of three runs and each run must last at least 1 hour. The production conditions during the test runs must represent normal production conditions with respect to the types of parts being made and material application methods. The production conditions during the test must also represent maximum potential emissions with respect to the organic HAP content of the materials being applied and the material application rates.

(e) During the test, you must also monitor and record separately the amounts of production resin, tooling resin, pigmented gel coat, clear gel coat, and tooling gel coat applied inside the enclosure that is vented to the control device.

§ 63.5722 How do I use the performance test data to demonstrate initial compliance?

Demonstrate initial compliance with the open molding emission limit as described in paragraphs (a) through (c) of this section:

(a) Calculate the organic HAP limit you must achieve using equation 1 of § 63.5698. For determining initial compliance, the organic HAP limit is based on the amount of material used during the performance test, in megagrams, rather than during the past 12 months. Calculate the limit using the megagrams of resin and gel coat applied inside the enclosure during the three runs of the performance test and equation 1 of § 63.5698.

(b) Add the total measured emissions, in kilograms, from all three of the 1-hour runs of the performance test.

(c) If the total emissions from the three 1-hour runs of the performance test are less than the organic HAP limit calculated in paragraph (a) of this section, then you have demonstrated initial compliance with the emission limit in § 63.5698 for those operations performed in the enclosure and controlled by the add-on control device.

§ 63.5725 What are the requirements for monitoring and demonstrating continuous compliance?

(a) You must establish control device parameters that indicate proper operation of the control device.

(b) You must install, operate, and maintain a continuous parameter monitoring system as specified in paragraphs (b)(1) through (8) of this section.

(1) The continuous parameter monitoring system must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four successive cycles of operation to have a valid hour of data.

(2) You must have valid data from at least 90 percent of the hours during which the process operated.

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

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

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

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

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

(8) Any period for which the monitoring system is out-of-control, as defined in § 63.7(d)(7), or malfunctioning, and data are not available for required calculations is a deviation from the monitoring requirements. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the continuous parameter monitoring system to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

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

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

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

well as every time the flow direction is changed. The flow control position indicator must be installed at the entrance to any bypass line that could divert the emissions away from the add-on control device to the atmosphere.

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

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

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

(2) If any bypass line is opened, you must include a description of why the bypass line was opened and the length of time it remained open in the semiannual compliance reports required in § 63.5764(d).

(d) *Thermal oxidizers.* If you are using a thermal oxidizer or incinerator as an add-on control device, you must comply with the requirements in paragraphs (d)(1) through (6) of this section.

(1) You must install a combustion temperature monitoring device in the firebox of the thermal oxidizer or incinerator, or in the duct immediately downstream of the firebox before any substantial heat exchange occurs. You must meet the requirements in paragraphs (b) and (d)(1)(i) through (vii) of this section for each temperature monitoring device.

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

(ii) Use a temperature sensor with a minimum tolerance of 2.2° C or 0.75 percent of the temperature value, whichever is larger.

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

(iv) If a chart recorder is used, it must have a sensitivity in the minor division of at least 10° C.

(v) Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, you must conduct a temperature sensor validation check in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 16.7° C of the process temperature sensor's reading.

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

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

(2) Before or during the performance test, you must conduct a performance evaluation of the combustion temperature monitoring system according to § 63.8(e). Section 63.8(e) specifies the general requirements for continuous monitoring systems and requirements for notifications, the site-specific performance evaluation plan, conduct of the performance evaluation, and reporting of performance evaluation results.

(3) During the performance test required by § 63.5716, you must monitor and record the combustion temperature and determine the average combustion temperature for the three 1-hour test runs. This average temperature is the minimum operating limit for the thermal oxidizer.

(4) Following the performance test, you must continuously monitor the combustion temperature and record the average combustion temperature no less frequently than every 15 minutes.

(5) You must operate the incinerator or thermal oxidizer so that the average combustion temperature in any 3-hour period does not fall below the average combustion temperature recorded during the performance test.

(6) If the average combustion temperature in any 3-hour period falls below the average combustion temperature recorded during the performance test, or if you fail to collect the minimum data specified in paragraph (d)(4) of this section, it is a deviation for the operating limit in § 63.5715.

(e) *Other control devices.* If you are using a control device other a thermal oxidizer, then you must comply with alternative monitoring requirements and operating limits approved by the Administrator under § 63.8(f).

(f) *Emission capture system.* For each enclosure in the emission capture system, you must comply with the requirements in paragraphs (f)(1) through (5) of this section.

(1) You must install a device to measure and record either the flow rate or the static pressure in the duct from each enclosure to the add-on control device.

(2) You must install a device to measure and record the pressure drop across at least one opening in each enclosure.

(3) Each flow measurement device must meet the requirements in paragraphs (b) and (f)(3)(i) through (iv) of this section.

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

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

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

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

(4) For each pressure measurement device, you must comply with the requirements in paragraphs (a) and (f)(4)(i) through (vii) of this section.

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

(ii) Locate each duct static pressure sensor in a position that provides a representative measurement of the static pressure in the duct between the enclosure and control device.

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

(iv) Check the pressure tap for plugging daily.

(v) Use an inclined manometer with a measurement sensitivity of 0.0004 millimeters mercury (mmHg) to check gauge calibration quarterly and transducer calibration monthly.

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

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

(5) For each capture device that is not part of a permanent total enclosure as defined in Method 204 in appendix M to 40 CFR part 51, you must establish

an operating limit for either the gas volumetric flow rate or duct static pressure, as specified in paragraphs (f)(5)(i) and (ii) of this section. You must also establish an operating limit for pressure drop across at least one opening in each enclosure according to paragraphs (f)(5)(iii) and (iv) of this section. The operating limits for a permanent total enclosure are specified in Table 4 to this subpart.

(i) During the emission test required by § 63.5716 and described in § 63.5719, you must monitor and record either the gas volumetric flow rate or the duct static pressure for each separate enclosure in your emission capture system at least once every 15 minutes during each of the three test runs at a point in the duct between the enclosure and the add-on control device inlet.

(ii) Following the emission test, calculate and record the average gas volumetric flow rate or duct static pressure for the three test runs for each enclosure. This average gas volumetric flow rate or duct static pressure is the minimum operating limit for that specific enclosure.

(iii) During the emission test required by § 63.5716 and described in § 63.5719, you must monitor and record the pressure drop across the opening of each enclosure in your emission capture system at least once every 15 minutes during each of the three test runs.

(iv) Following the emission test, calculate and record the average pressure drop for the three test runs for each enclosure. This average pressure drop is the minimum operating limit for that specific enclosure.

Standards for Closed Molding Resin Operations

§ 63.5728 What standards must I meet for closed molding resin operations?

(a) If a resin application operation meets the definition of closed molding specified in § 63.5779, there is no requirement to reduce emissions from that operation.

(b) If the resin application operation does not meet the definition of closed molding, then you must comply with the limit for open molding resin operations specified in § 63.5698.

(c) Open molding resin operations that precede a closed molding operation must comply with the limit for open molding resin and gel coat operations specified in § 63.5698. Examples of these operations include gel coat or skin coat layers that are applied before lamination is performed by closed molding.

Standards for Resin and Gel Coat Mixing Operations

§ 63.5731 What standards must I meet for resin and gel coat mixing operations?

(a) All resin and gel coat mixing containers with a capacity equal to or greater than 208 liters, including those used for on-site mixing of putties and polyputties, must have a cover with no visible gaps in place at all times.

(b) The work practice standard in paragraph (a) of this section does not apply when material is being manually added to or removed from a container, or when mixing or pumping equipment is being placed in or removed from a container.

(c) To demonstrate compliance with the work practice standard in paragraph (a) of this section, you must visually inspect all mixing containers subject to this standard at least once per month. The inspection should ensure that all containers have covers with no visible gaps between the cover and the container, or between the cover and equipment passing through the cover.

(d) You must keep records of which mixing containers are subject to this standard and the results of the inspections, including a description of any repairs or corrective actions taken.

Standards for Resin and Gel Coat Application Equipment Cleaning Operations

§ 63.5734 What standards must I meet for resin and gel coat application equipment cleaning operations?

(a) For routine flushing of resin and gel coat application equipment (e.g., spray guns, flowcoaters, brushes, rollers, and squeegees), you must use a cleaning solvent that contains no more than 5 percent organic HAP by weight. For removing cured resin or gel coat from application equipment, no organic HAP content limit applies.

(b) You must store organic HAP-containing solvents used for removing cured resin or gel coat in containers with covers. The covers must have no visible gaps and must be in place at all times, except when equipment to be cleaned is placed in or removed from the container. On containers with a capacity greater than 7.6 liters, the distance from the top of the container to the solvent surface must be no less than 0.75 times the diameter of the container. Containers that store organic HAP-containing solvents used for removing cured resin or gel coat are exempt from the requirements of 40 CFR part 63, subpart T. Cured resin or gel coat means resin or gel coat that has changed from a liquid to a solid.

§ 63.5737 How do I demonstrate compliance with the resin and gel coat application equipment cleaning standards?

(a) Determine and record the organic HAP content of the cleaning solvents subject to the standards specified in § 63.5734 using the methods specified in § 63.5758.

(b) If you recycle cleaning solvents on site, you may use documentation from the solvent manufacturer or supplier or a measurement of the organic HAP content of the cleaning solvent as originally obtained from the solvent supplier for demonstrating compliance, subject to the conditions in § 63.5758 for demonstrating compliance with organic HAP content limits.

(c) At least once per month, you must visually inspect any containers holding organic HAP-containing solvents used for removing cured resin and gel coat to ensure that the containers have covers with no visible gaps. Keep records of the monthly inspections and any repairs made to the covers.

Standards for Carpet and Fabric Adhesive Operations

§ 63.5740 What emission limit must I meet for carpet and fabric adhesive operations?

(a) You must use carpet and fabric adhesives that contain no more than 5 percent organic HAP by weight.

(b) To demonstrate compliance with the emission limit in paragraph (a) of this section, you must determine and record the organic HAP content of the carpet and fabric adhesives using the methods in § 63.5758.

Standards for Aluminum Recreational Boat Surface Coating Operations

§ 63.5743 What standards must I meet for aluminum recreational boat surface coating operations?

(a) For aluminum wipedown solvent operations and aluminum surface coating operations, you must comply with either the separate emission limits in paragraphs (a)(1) and (2) of this section, or the combined emission limit in paragraph (a)(3) of this section. Compliance with these limitations is based on a 12-month rolling average that is calculated at the end of every month.

(1) You must limit emissions from aluminum wipedown solvents to no more than 0.33 kilograms of organic HAP per liter of total coating solids applied from aluminum primers, clear coats, and top coats combined. No limit applies when cleaning surfaces are receiving decals or adhesive graphics.

(2) You must limit emissions from aluminum recreational boat surface coatings (including thinners, activators, primers, topcoats, and clear coats) to no

more than 1.22 kilograms of organic HAP per liter of total coating solids applied from aluminum primers, clear coats, and top coats combined.

(3) You must limit emissions from the combined aluminum surface coatings and aluminum wipedown solvents to no more than 1.55 kilograms of organic HAP per liter of total coating solids applied from aluminum primers, clear coats, and top coats combined.

(b) You must comply with the work practice standard in paragraph (b)(1), (2), (3), or (4) of this section when cleaning aluminum coating spray guns with solvents containing more than 5 percent organic HAP by weight.

(1) Clean spray guns in an enclosed device. Keep the device closed except when you place spray guns in or remove them from the device.

(2) Disassemble the spray gun and manually clean the components in a vat. Keep the vat closed when you are not using it.

(3) Clean spray guns by placing solvent in the pressure pot and forcing the solvent through the gun. Do not use atomizing air during this procedure. Direct the used cleaning solvent from the spray gun into a container that you keep closed when you are not using it.

(4) An alternative gun cleaning process or technology approved by the Administrator according to the procedures in § 63.6(g).

§ 63.5746 How do I demonstrate compliance with the emission limits for aluminum wipedown solvents and aluminum coatings?

To demonstrate compliance with the emission limits for aluminum wipedown solvents and aluminum coatings specified in § 63.5743(a), you must meet the requirements of paragraphs (a) through (f) of this section.

(a) Determine and record the organic HAP content (kilograms of organic HAP per kilogram of material, or weight fraction) of each aluminum wipedown solvent and aluminum coating (including primers, topcoats, clear coats, thinners, and activators). Use the methods in § 63.5758 to determine organic HAP content.

(b) Use the methods in § 63.5758(b) to determine the solids content (liters of solids per liter of coating, or volume fraction) of each aluminum surface coating, including primers, topcoats, and clear coats. Keep records of the solids content.

(c) Use the methods in § 63.5758(c) to determine the density of each aluminum surface coating and wipedown solvent.

(d) Compliance is based on a 12-month rolling average calculated at the end of every month. The first 12-month rolling-average period begins on the compliance date specified in § 63.5695.

(e) At the end of the twelfth month after your compliance date and at the end of every subsequent month, use the procedures in § 63.5749 to calculate the organic HAP from aluminum wipedown solvents per liter of coating solids, and use the procedures in § 63.5752 to calculate the kilograms of organic HAP from aluminum coatings per liter of coating solids.

(f) Keep records of the calculations used to determine compliance.

(g) *Approval of alternative means of demonstrating compliance.* You may apply to the Administrator for permission to use an alternative means (such as an add-on control system) of limiting emissions from aluminum wipedown solvent and coating operations and demonstrating compliance with the emission limits in § 63.5743(a).

(1) The application must include the information listed in paragraphs (g)(1)(i) through (iii) of this section.

(i) An engineering evaluation that compares the emissions using the alternative means to the emissions that would result from using the strategy specified in paragraphs (a) through (e) of this section. The engineering evaluation may include the results from an emission test that accurately measures the capture efficiency and control device efficiency achieved by the control system and the composition of the associated coatings so that the emissions comparison can be made.

(ii) A proposed monitoring protocol that includes operating parameter values to be monitored for compliance and an explanation of how the operating parameter values will be established through a performance test.

(iii) Details of appropriate recordkeeping and reporting procedures.

(2) The Administrator will approve the alternative means of limiting emissions if the Administrator determines that HAP emissions will be no greater than if the source uses the procedures described in paragraphs (a) through (e) of this section to demonstrate compliance.

(3) The Administrator's approval may specify operation, maintenance, and monitoring requirements to ensure that emissions from the regulated operations are no greater than those that would otherwise result from regulated operations in compliance with this subpart.

§ 63.5749 How do I calculate the organic HAP content of aluminum wipedown solvents?

(a) Use equation 1 of this section to calculate the weighted-average organic HAP content of aluminum wipedown solvents used in the past 12 months.

$$HAP_{WD} = \frac{\sum_{j=1}^{n} (Vol_j)(D_j)(W_j)}{\sum_{i=1}^{m} (Vol_i)(Solids_i)} \qquad \text{(Eq. 1)}$$

Where:

HAP_{WD}= weighted-average organic HAP content of aluminum wipedown solvents, kilograms of HAP per liter of total coating solids from aluminum primers, top coats, and clear coats.

n = number of different wipedown solvents used in the past 12 months.

Vol_j= volume of aluminum wipedown solvent j used in the past 12 months, liters.

D_j= density of aluminum wipedown solvent j, kilograms per liter.

W_j= mass fraction of organic HAP in aluminum wipedown solvent j.

m = number of different aluminum surface coatings (primers, top coats, and clear coats) used in the past 12 months.

Vol_i = volume of aluminum primer, top coat, or clear coat i used in the past 12 months, liters.

$Solids_i$= solids content aluminum primer, top coat, or clear coat i, liter solids per liter of coating.

(b) Compliance is based on a 12-month rolling average. If the weighted-average organic HAP content does not exceed 0.33 kilograms of organic HAP per liter of total coating solids, then you are in compliance with the emission limit specified in § 63.5743(a)(1).

§ 63.5752 How do I calculate the organic HAP content of aluminum recreational boat surface coatings?

(a) Use equation 1 of this section to calculate the weighted-average HAP content for all aluminum surface coatings used in the past 12 months.

$$HAP_{SC} = \frac{\sum_{i=1}^{m}(Vol_i)(D_i)(W_i) + \sum_{k=1}^{D}(Vol_k)(D_k)(W_k)}{\sum_{i=1}^{m}(Vol_i)(Solids_i)} \quad \text{(Eq. 1)}$$

Where:

HAP_{SC} = weighted-average organic HAP content for all aluminum coating materials, kilograms of organic HAP per liter of coating solids.

m = number of different aluminum primers, top coats, and clear coats used in the past 12 months.

Vol_i = volume of aluminum primer, top coat, or clear coat i used in the past 12 months, liters.

D_i= density of coating i, kilograms per liter.

W_i= mass fraction of organic HAP in coating i, kilograms of organic HAP per kilogram of coating.

p = number of different thinners, activators, and other coating additives used in the past 12 months.

Vol_k= total volume of thinner, activator, or additive k used in the past 12 months, liters.

D_k= density of thinner, activator, or additive k, kilograms per liter.

W_k= mass fraction of organic HAP in thinner, activator, or additive k, kilograms of organic HAP per kilogram of thinner or activator.

$Solids_i$= solids content of aluminum primer, top coat, or clear coat i, liter solids per liter of coating.

(b) Compliance is based on a 12-month rolling average. If the weighted-average organic HAP content does not exceed 1.22 kilograms of organic HAP per liter of coating solids, then you are in compliance with the emission limit specified in § 63.5743(a)(2).

§ 63.5753 How do I calculate the combined organic HAP content of aluminum wipedown solvents and aluminum recreational boat surface coatings?

(a) Use equation 1 of this section to calculate the combined weighted-average organic HAP content of aluminum wipedown solvents and aluminum recreational boat surface coatings.

$$HAP_{Combined} = HAP_{WD} + HAP_{SC} \quad \text{(Eq. 1)}$$

Where:

HAP_{WD} = the weighted-average organic HAP content of aluminum wipedown solvents used in the past 12 months, calculated using equation 1 of § 63.5749.

HAP_{SC} = the weighted average organic HAP content of aluminum recreational boat surface coatings used in the past 12 months, calculated using equation 1 of § 63.5752.

(b) Compliance is based on a 12-month rolling average. If the combined organic HAP content does not exceed 1.55 kilograms of organic HAP per liter of total coating solids, then you are in compliance with the emission limit specified in § 63.5743(a)(3).

§ 63.5755 How do I demonstrate compliance with the aluminum recreational boat surface coating spray gun cleaning work practice standards?

You must demonstrate compliance with the aluminum coating spray gun cleaning work practice standards by meeting the requirements of paragraph (a) or (b) of this section.

(a) Demonstrate that solvents used to clean the aluminum coating spray guns contain no more than 5 percent organic HAP by weight by determining organic HAP content with the methods in § 63.5758. Keep records of the organic HAP content determination.

(b) For solvents containing more than 5 percent organic HAP by weight, comply with the requirements in paragraph (b)(1) or (b)(2), and paragraph (b)(3) of this section.

(1) If you are using an enclosed spray gun cleaner, visually inspect it at least once per month to ensure that covers are in place and the covers have no visible gaps when the cleaner is not in use, and that there are no leaks from hoses or fittings.

(2) If you are manually cleaning the gun or spraying solvent into a container that can be closed, visually inspect all solvent containers at least once per month to ensure that the containers have covers and the covers fit with no visible gaps.

(3) Keep records of the monthly inspections and any repairs that are made to the enclosed gun cleaners or the covers.

Methods for Determining Hazardous Air Pollutant Content

§ 63.5758 How do I determine the organic HAP content of materials?

(a) *Determine the organic HAP content for each material used.* To determine the organic HAP content for each material used in your open molding resin and gel coat operations, carpet and fabric adhesive operations, or aluminum recreational boat surface coating operations, you must use one of the options in paragraphs (a)(1) through (6) of this section.

(1) *Method 311 (appendix A to 40 CFR part 63).* You may use Method 311 for determining the mass fraction of organic HAP. Use the procedures specified in paragraphs (a)(1)(i) and (ii) of this section when determining organic HAP content by Method 311.

(i) Include in the organic HAP total each organic HAP that is measured to be present at 0.1 percent by mass or more for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is measured to be 0.5 percent of the material by mass, you do not need to include it in the organic HAP total. Express the mass fraction of each organic HAP you measure as a value truncated to four places after the decimal point (for example, 0.1234).

(ii) Calculate the total organic HAP content in the test material by adding up the individual organic HAP contents and truncating the result to three places after the decimal point (for example, 0.123).

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

(3) *ASTM D1259–85 (Standard Test Method for Nonvolatile Content of Resins).* You may use ASTM D1259–85 (available for purchase from ASTM) to measure the mass fraction of volatile

matter of resins and gel coats for open molding operations and use that value as a substitute for mass fraction of organic HAP.

(4) *Alternative method.* You may use an alternative test method for determining mass fraction of organic 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.

(5) *Information from the supplier or manufacturer of the material.* You may rely on information other than that generated by the test methods specified in paragraphs (a)(1) through (4) of this section, such as manufacturer's formulation data, according to paragraphs (a)(5)(i) through (iii) of this section.

(i) Include in the organic HAP total each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is 0.5 percent of the material by mass, you do not have to include it in the organic HAP total.

(ii) If the organic HAP content is provided by the material supplier or manufacturer as a range, then you must use the upper limit of the range for determining compliance. If a separate measurement of the total organic HAP content using the methods specified in paragraphs (a)(1) through (4) of this section exceeds the upper limit of the range of the total organic HAP content provided by the material supplier or manufacturer, then you must use the measured organic HAP content to determine compliance.

(iii) If the organic HAP content is provided as a single value, you may assume the value is a manufacturing target value and actual organic HAP content may vary from the target value. If a separate measurement of the total organic HAP content using the methods specified in paragraphs (a)(1) through (4) of this section is less than 2 percentage points higher than the value for total organic HAP content provided by the material supplier or manufacturer, then you may use the provided value to demonstrate compliance. If the measured total organic HAP content exceeds the provided value by 2 percentage points or more, then you must use the measured organic HAP content to determine compliance.

(6) *Solvent blends.* Solvent blends may be listed as single components for some regulated materials in certifications provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP content of the materials. When detailed organic HAP content data for solvent blends are not available, you may use the values for organic HAP content that are listed in Table 5 or 6 to this subpart. You may use Table 6 to this subpart only if the solvent blends in the materials you use do not match any of the solvent blends in Table 5 to this subpart and you know only whether the blend is either aliphatic or aromatic. However, if test results indicate higher values than those listed in Table 5 or 6 to this subpart, then the test results must be used for determining compliance.

(b) *Determine the volume fraction solids in aluminum recreational boat surface coatings.* To determine the volume fraction of coating solids (liters of coating solids per liter of coating) for each aluminum recreational boat surface coating, you must use one of the methods specified in paragraphs (b)(1) through (3) of this section. If the results obtained with paragraphs (b)(2) or (3) of this section do not to agree with those obtained according to paragraph (b)(1) of this section, you must use the results obtained with paragraph (b)(1) of this section to determine compliance.

(1) *ASTM Method D2697–86(1998) or D6093–97.* You may use ASTM Method D2697–86(1998) or D6093–97 (available for purchase from ASTM) to determine the volume fraction of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids.

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

(3) *Calculation of volume fraction of coating solids.* You may determine it using equation 1 of this section:

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

Where:

Solids=volume fraction of coating solids, liters coating solids per liter coating.

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

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

(c) *Determine the density of each aluminum recreational boat wipedown solvent and surface coating.* Determine the density of all aluminum recreational boat wipedown solvents, surface coatings, thinners, and other additives from test results using ASTM Method D1475–90, information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475–90 test results and other information sources, you must use the test results to demonstrate compliance.

Notifications, Reports, and Records

§ 63.5761 What notifications must I submit and when?

(a) You must submit all of the notifications in Table 7 to this subpart that apply to you by the dates in the table. The notifications are described more fully in 40 CFR part 63, subpart A, General Provisions, referenced in Table 8 to this subpart.

(b) If you change any information submitted in any notification, you must submit the changes in writing to the Administrator within 15 calendar days after the change.

§ 63.5764 What reports must I submit and when?

(a) You must submit the applicable reports specified in paragraphs (b) through (e) of this section. To the extent possible, you must organize each report according to the operations covered by this subpart and the compliance procedure followed for that operation.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report by the dates in paragraphs (b)(1) through (5) of this section.

(1) If your source is not controlled by an add-on control device (i.e., you are complying with organic HAP content limits, application equipment requirements, or MACT model point value averaging provisions), the first compliance report must cover the period beginning 12 months after the compliance date specified for your source in § 63.5695 and ending on June

30 or December 31, whichever date is the first date following the end of the first 12-month period after the compliance date that is specified for your source in § 63.5695. If your source is controlled by an add-on control device, the first compliance report must cover the period beginning on the compliance date specified for your source in § 63.5695 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in § 63.5695.

(2) The first compliance report must be postmarked or delivered no later than 60 calendar days after the end of the compliance reporting period specified in paragraph (b)(1) of this section.

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

(4) Each subsequent compliance report must be postmarked or delivered no later than 60 calendar days after the end of the semiannual reporting period.

(5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 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 paragraphs (b)(1) through (4) of this section.

(c) The compliance report must include the information specified in paragraphs (c)(1) through (7) of this section.

(1) Company name and address.

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

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

(4) A description of any changes in the manufacturing process since the last compliance report.

(5) A statement or table showing, for each regulated operation, the applicable organic HAP content limit, application equipment requirement, or MACT model point value averaging provision with which you are complying. The statement or table must also show the actual weighted-average organic HAP content or weighted-average MACT model point value (if applicable) for each operation during each of the rolling 12-month averaging periods that end during the reporting period.

(6) If you were in compliance with the emission limits and work practice standards during the reporting period, you must include a statement to that effect.

(7) If you deviated from an emission limit or work practice standard during the reporting period, you must also include the information listed in paragraphs (c)(7)(i) through (iv) of this section in the semiannual compliance report.

(i) A description of the operation involved in the deviation.

(ii) The quantity, organic HAP content, and application method (if relevant) of the materials involved in the deviation.

(iii) A description of any corrective action you took to minimize the deviation and actions you have taken to prevent it from happening again.

(iv) A statement of whether or not your facility was in compliance for the 12-month averaging period that ended at the end of the reporting period.

(d) If your facility has an add-on control device, you must submit semiannual compliance reports and quarterly excess emission reports as specified in § 63.10(e). The contents of the reports are specified in § 63.10(e).

(e) If your facility has an add-on control device, you must complete a startup, shutdown, and malfunction plan as specified in § 63.6(e), and you must submit the startup, shutdown, and malfunction reports specified in § 63.10(e)(5).

§ 63.5767 What records must I keep?

You must keep the records specified in paragraphs (a) through (d) of this section in addition to records specified in individual sections of this subpart.

(a) You must keep a copy of each notification and report that you submitted to comply with this subpart.

(b) You must keep all documentation supporting any notification or report that you submitted.

(c) If your facility is not controlled by an add-on control device (i.e., you are complying with organic HAP content limits, application equipment requirements, or MACT model point value averaging provisions), you must keep the records specified in paragraphs (c)(1) through (3) of this section.

(1) The total amounts of open molding production resin, pigmented gel coat, clear gel coat, tooling resin, and tooling gel coat used per month and the weighted-average organic HAP contents for each operation, expressed as weight-percent. For open molding production resin and tooling resin, you must also record the amounts of each applied by atomized and nonatomized methods.

(2) The total amount of each aluminum coating used per month (including primers, top coats, clear coats, thinners, and activators) and the weighted-average organic HAP content as determined in § 63.5752.

(3) The total amount of each aluminum wipedown solvent used per month and the weighted-average organic HAP content as determined in § 63.5749.

(d) If your facility has an add-on control device, you must keep the records specified in § 63.10(b) relative to control device startup, shut down, and malfunction events; control device performance tests; and continuous monitoring system performance evaluations.

§ 63.5770 In what form and for how long must I keep my records?

(a) Your records must be readily available and in a form so they can be easily inspected and reviewed.

(b) You must keep each record for 5 years following the date that each record is generated.

(c) You must keep each record on site for at least 2 years after the date that each record is generated. You can keep the records offsite for the remaining 3 years.

(d) You can keep the records on paper or an alternative media, such as microfilm, computer, computer disks, magnetic tapes, or on microfiche.

Other Information You Need To Know

§ 63.5773 What parts of the General Provisions apply to me?

You must comply with the requirements of the General Provisions in 40 CFR part 63, subpart A, as specified in Table 8 to this subpart.

§ 63.5776 Who implements and enforces this subpart?

(a) If the Administrator has delegated authority to your State or local agency, the State or local agency has the authority to implement and enforce this subpart.

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

(1) Under § 63.6(g), the authority to approve alternatives to the standards listed in paragraphs (b)(1)(i) through (vii) of this section is not delegated.

(i) § 63.5698—Emission limit for open molding resin and gel coat operations.

(ii) § 63.5728—Standards for closed molding resin operations.

(iii) § 63.5731(a)—Standards for resin and gel coat mixing operations.

(iv) § 63.5734—Standards for resin and gel coat application equipment cleaning operations.

(v) § 63.5740(a)—Emission limit for carpet and fabric adhesive operations.

(vi) § 63.5743—Standards for aluminum recreational boat surface coating operations.

(vii) § 63.5746(g)—Approval of alternative means of demonstrating compliance with the emission limits for aluminum recreational boat surface coating operations.

(2) Under § 63.7(e)(2)(ii) and (f), the authority to approve alternatives to the test methods listed in paragraphs (b)(2)(i) through (iv) of this section is not delegated.

(i) § 63.5719(b)—Method for determining whether an enclosure is a total enclosure.

(ii) § 63.5719(c)—Methods for measuring emissions from a control device.

(iii) § 63.5725(d)(1)—Performance specifications for thermal oxidizer combustion temperature monitors.

(iv) § 63.5758—Method for determining hazardous air pollutant content of regulated materials.

(3) Under § 63.8(f), the authority to approve major alternatives to the monitoring requirements listed in § 63.5725 is not delegated. A ''major alternative'' is defined in § 63.90.

(4) Under § 63.10(f), the authority to approve major alternatives to the reporting and recordkeeping requirements listed in §§ 63.5764, 63.5767, and 63.5770 is not delegated. A ''major alternative'' is defined in § 63.90.

Definitions

§ 63.5779 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in § 63.2, and in this section as follows:

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

Administrator means the Administrator of the United States Environmental Protection Agency (U.S. EPA) or an authorized representative (for example, a State delegated the authority to carry out the provisions of this subpart).

Aluminum recreational boat means any marine or freshwater recreational boat that has a hull or deck constructed primarily of aluminum. A recreational boat is a vessel which by design and construction is intended by the manufacturer to be operated primarily for pleasure, or to be leased, rented or chartered to another for the latter's pleasure (rather than for commercial or military purposes); and whose major structural components are fabricated and assembled in an indoor, production-line manufacturing plant or similar land-side operation and not in a dry dock, graving dock, or marine railway on the navigable waters of the United States.

Aluminum recreational boat surface coating operation means the application of primers or top coats to aluminum recreational boats. It also includes the application of clear coats over top coats. Aluminum recreational boat surface coating operations do not include the application of wood coatings or antifoulant coatings to aluminum recreational boats.

Aluminum coating spray gun cleaning means the process of flushing or removing paints or coatings from the interior or exterior of a spray gun used to apply aluminum primers, clear coats, or top coats to aluminum recreational boats.

Aluminum wipedown solvents means solvents used to remove oil, grease, welding smoke, or other contaminants from the aluminum surfaces of a boat before priming or painting. Aluminum wipedown solvents contain no coating solids; aluminum surface preparation materials that contain coating solids are considered coatings for the purpose of this subpart and are not wipedown solvents.

Antifoulant coating means any coating that is applied to the underwater portion of a boat specifically to prevent or reduce the attachment of biological organisms and that is registered with EPA as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. section 136, *et seq.*). For the purpose of this subpart, primers used with antifoulant coatings to prepare the surface to accept the antifoulant coating are considered antifoulant coatings.

Assembly adhesive means any chemical material used in the joining of one fiberglass, metal, foam, or wood parts to another to form a temporary or permanently bonded assembly. Assembly adhesives include, but are not limited to, methacrylate adhesives and putties made from polyester or vinylester resin mixed with inert fillers or fibers.

Atomized resin application means a resin application technology in which the resin leaves the application equipment and breaks into droplets or an aerosol as it travels from the application equipment to the surface of the part. Atomized resin application includes, but is not limited to, resin spray guns and resin chopper spray guns.

Boat means any type of vessel, other than a seaplane, that can be used for transportation on the water.

Boat manufacturing facility means a facility that manufactures the hulls or decks of boats from fiberglass or aluminum or assembles boats from premanufactured hulls and decks, or builds molds to make fiberglass hulls or decks. A facility that manufactures only parts of boats (such as hatches, seats, or lockers) or boat trailers, but no boat hulls or decks or molds for fiberglass boat hulls or decks, is not considered a boat manufacturing facility for the purpose of this subpart.

Carpet and fabric adhesive means any chemical material that permanently attaches carpet, fabric, or upholstery to any surface of a boat.

Clear gel coat means gel coats that are clear or translucent so that underlying colors are visible. Clear gel coats are used to manufacture parts for sale. Clear gel coats do not include tooling gel coats used to build or repair molds.

Closed molding means any molding process in which pressure is used to distribute the resin through the reinforcing fabric placed between two mold surfaces to either saturate the fabric or fill the mold cavity. The pressure may be clamping pressure, fluid pressure, atmospheric pressure, or vacuum pressure used either alone or in combination. The mold surfaces may be rigid or flexible. Closed molding includes, but is not limited to, compression molding with sheet molding compound, infusion molding, resin injection molding (RIM), vacuum-assisted resin transfer molding (VARTM), resin transfer molding (RTM), and vacuum-assisted compression molding. Processes in which a closed mold is used only to compact saturated fabric or remove air or excess resin from the fabric (such as in vacuum bagging), are not considered closed molding. Open molding steps, such as application of a gel coat or skin coat layer by conventional open molding prior to a closed molding process, are not closed molding.

Cured resin and gel coat means resin or gel coat that has been polymerized and changed from a liquid to a solid.

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 requirement;

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

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

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

Fiberglass boat means a vessel in which either the hull or deck is built from a composite material consisting of a thermosetting resin matrix reinforced with fibers of glass, carbon, aramid, or other material.

Fiberglass hull and deck coatings means coatings applied to the exterior or interior surface of fiberglass boat hulls and decks on the completed boat. Polyester and vinylester resins and gel coats used in building fiberglass parts are not fiberglass hull and deck coatings for the purpose of this subpart.

Filled resin means a resin to which an inert material has been added to change viscosity, density, shrinkage, or other physical properties.

Gel coat means a thermosetting resin surface coating containing styrene (Chemical Abstract Service or CAS No. 100–42–5) or methyl methacrylate (CAS No. 80–62–6), either pigmented or clear, that provides a cosmetic enhancement or improves resistance to degradation from exposure to the elements. Gel coat layers do not contain any reinforcing fibers and gel coats are applied directly to mold surfaces or to a finished laminate.

Hazardous air pollutant or HAP means any air pollutant listed in, or pursuant to section 112(b) of the Clean Air Act.

Hazardous air pollutant content or HAP content means the amount of HAP contained in a regulated material at the time it is applied to the part being manufactured. If no HAP is added to a material as a thinner or diluent, then the HAP content is the same as the HAP content of the material as purchased from the supplier. For resin and gel coat, HAP content does not include any HAP contained in the catalyst added to the resin or gel coat during application to initiate curing.

Hazardous air pollutant data sheet (HDS) means documentation furnished by a material supplier or an outside laboratory to provide the organic HAP content of the material by weight, measured using an EPA Method, manufacturer's formulation data, or an equivalent method. For aluminum coatings, the HDS also documents the solids content by volume, determined from the manufacturer's formulation data. The purpose of the HDS is to help the affected source in showing compliance with the organic HAP content limits contained in this subpart. The HDS must state the maximum total organic HAP concentration, by weight, of the material. It must include any organic HAP concentrations equal to or greater than 0.1 percent by weight for individual organic HAP that are carcinogens, as defined by the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR part 1910), and 1.0 percent by weight for all other individual organic HAP, as formulated. The HDS must also include test conditions if EPA Method 311 is used for determining organic HAP content.

Maximum achievable control technology (MACT) model point value means a number calculated for open molding operations that is a surrogate for emissions and is used to determine if your open molding operations are in compliance with the provisions of this subpart. The units for MACT model point values are kilograms of organic HAP per megagram of resin or gel coat applied.

Manufacturer's certification means documentation furnished by a material supplier that shows the organic HAP content of a material and includes a HDS.

Mold means the cavity or surface into or on which gel coat, resin, and fibers are placed and from which finished fiberglass parts take their form.

Mold sealing and release agents means materials applied to a mold to seal, polish, and lubricate the mold to prevent parts from sticking to the mold. Mold sealers, waxes, and glazing and buffing compounds are considered mold sealing and release agents for the purposes of this subpart.

Mold stripping and cleaning solvents means materials used to remove mold sealing and release agents from a mold before the mold surface is repaired, polished, or lubricated during normal mold maintenance.

Month means a calendar month.

Neat resin means a resin to which no filler has been added.

Nonatomized resin application means any application technology in which the resin is not broken into droplets or an aerosol as it travels from the application equipment to the surface of the part. Nonatomized resin application technology includes, but is not limited to, flowcoaters, chopper flowcoaters, pressure fed resin rollers, resin impregnators, and hand application (for example, paint brush or paint roller).

Open molding resin and gel coat operation means any process in which the reinforcing fibers and resin are placed in the mold and are open to the surrounding air while the reinforcing fibers are saturated with resin. For the purposes of this subpart, open molding includes operations in which a vacuum bag or similar cover is used to compress an uncured laminate to remove air bubbles or excess resin, or to achieve a bond between a core material and a laminate.

Pigmented gel coat means opaque gel coats used to manufacture parts for sale. Pigmented gel coats do not include tooling gel coats used to build or repair molds.

Production resin means any resin used to manufacture parts for sale. Production resins do not include tooling resins used to build or repair molds, or assembly adhesives as defined in this section.

Recycled resin and gel coat application equipment cleaning solvent means cleaning solvents recycled on-site or returned to the supplier or another party to remove resin or gel coat residues so that the solvent can be reused.

Research and development activities means:

(1) Activities conducted at a laboratory to analyze air, soil, water, waste, or product samples for contaminants, environmental impact, or quality control;

(2) Activities conducted to test more efficient production processes or methods for preventing or reducing adverse environmental impacts, provided that the activities do not include the production of an intermediate or final product for sale or exchange for commercial profit, except in a *de minimis* manner; and

(3) Activities conducted at a research or laboratory facility that is operated under the close supervision of technically trained personnel, the primary purpose of which is to conduct research and development into new processes and products and that is not engaged in the manufacture of products for sale or exchange for commercial profit, except in a *de minimis* manner.

Resin means any thermosetting resin with or without pigment containing styrene (CAS No. 100–42–5) or methyl

methacrylate (CAS No. 80–62–6) and used to encapsulate and bind together reinforcement fibers in the construction of fiberglass parts.

Resin and gel coat application equipment cleaning means the process of flushing or removing resins and gel coats from the interior or exterior of equipment that is used to apply resin or gel coat in the manufacture of fiberglass parts.

Resin and gel coat mixing operation means any operation in which resin or gel coat, including the mixing of putties or polyputties, is combined with additives that include, but are not limited to, fillers, promoters, or catalysts.

Roll-out means the process of using rollers, squeegees, or similar tools to compact reinforcing materials saturated with resin to remove trapped air or excess resin.

Skin coat is a layer of resin and fibers applied over the gel coat to protect the gel coat from being deformed by the next laminate layers.

Tooling resin means the resin used to build or repair molds (also known as tools) or prototypes (also known as plugs) from which molds will be made.

Tooling gel coat means the gel coat used to build or repair molds (also known as tools) or prototypes (also known as plugs) from which molds will be made.

Vacuum bagging means any molding technique in which the reinforcing fabric is saturated with resin and then covered with a flexible sheet that is sealed to the edge of the mold and where a vacuum is applied under the sheet to compress the laminate, remove excess resin, or remove trapped air from the laminate during curing. Vacuum bagging does not include processes that meet the definition of closed molding.

Vinylester resin means a thermosetting resin containing esters of acrylic or methacrylic acids and having double-bond and ester linkage sites only at the ends of the resin molecules.

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

Wood coatings means coatings applied to wooden parts and surfaces of boats, such as paneling, cabinets, railings, and trim. Wood coatings include, but are not limited to, primers, stains, sealers, varnishes, and enamels. Polyester and vinylester resins or gel coats applied to wooden parts to encapsulate them or bond them to other parts are not wood coatings.

Tables to Subpart VVVV

Table 1 to Subpart VVVV—Compliance Dates for New and Existing Boat Manufacturing Facilities

As specified in § 63.5695, you must comply by the dates in the following table:

If your facility is—	And—	Then you must comply by this date—
1. An existing source	Is a major source on or before August 22, 2001[1].	August 23, 2004.
2. An existng or new area source	Becomes a major source after August 22, 2001[1].	1 year after becoming a major source or August 22, 2002, whichever is later.
3. A new source	Is a major source at startup[1]	Upon startup or August 22, 2001, whichever is later.

[1]Your facility is a major source if it is a stationary source or group of stationary sources located within a contiguous area and under common control that emits or can potentially emit, considering controls, in the aggregate, 9.1 megagrams or more per year of a single hazardous air pollutant or 22.7 megagrams or more per year of a combination of hazardous air pollutants.

Table 2 to Subpart VVVV—Alternative Organic HAP Content Requirements for Open Molding Resin and Gel Coat Operations

As specified in §§ 63.5701(b), 63.5704(b)(2), and 63.5713(a), (b), and (d), you must comply with the requirements in the following table:

For this operation—	And this applicaton method—	You must not exceed this weighted-average organic HAP content (weight percent) requirement—
1. Production resin operations	Atomized (spray)	28 percent.
2. Production resin operations	Nonatomized (nonspray)	35 percent.
3. Pigmented gel coat operations	Any method	33 percent.
4. Clear gel coat operations	Any method	48 percent
5. Tooling resin operations	Atomized (spray)	30 percent.
6. Tooling resin operations	Nonatomized (nonspray)	39 percent.
7. Tooling gel coat operations	Any method	40 percent.

Table 3 to Subpart VVVV—MACT Model Point Value Formulas for Open Molding Operations[1]

As specified in §§ 63.5710(d) and 63.5714(a), you must calculate point values using the formulas in the following table:

For this operation—	And this application method—	Use this formula to calculate the MACT model plant value for each resin and gel coat—
1. Production resin, tooling resin	a. Atomized	$0.014 \times (\text{Resin HAP\%})^{2.425}$
	b. Atomized, plus vacumm bagging with roll-out	$0.01185 \times (\text{Resin HAP\%})^{2.425}$
	c. Atomized, plus vacuum bagging without roll-out	$0.00945 \times (\text{Resin HAP\%})^{2.425}$
	d. Nonatomized	$0.014 \times (\text{Resin HAP\%})^{2.275}$
	e. Nonatomized, plus vaccum bagging with roll-out	$0.0110 \times (\text{Resin HAP\%})^{2.275}$
	f. Nonatomized, plus vacuum bagging without roll-out.	$0.0076 \times (\text{Resin HAP\%})^{2.275}$

For this operation—	And this application method—	Use this formula to calculate the MACT model plant value for each resin and gel coat—
2. Pigmented gel coat, clear gel coat, tooling gel coat	All methods	$0.445 \times (\text{Gel coat HAP\%})^{1.675}$

[1]Equations calculate MACT model point value in kilograms of organic HAP per megagrams of resin or gel coat applied. The equations for vacuum bagging with roll-out are applicable when a facility rolls out the applied resin and fabric prior to applying the vacuum bagging materials. The equations for vacuum bagging without roll-out are applicable when a facility applies the vacuum bagging materials immediately after resin application without rolling out the resin and fabric. HAP% = organic HAP content as supplied, expressed as a weight-percent value between 0 and 100 percent.

Table 4 to Subpart VVVV—Operating Limits if Using an Add-on Control Device for Open Molding Operations

As specified in §§ 63.5715(a) and 63.5725(f)(5), you must meet the operating limits in the following table:

For the following device—	You must meet the following operating limit—	And you must demonstrate continuous compliance with the operating limit by—
1. Thermal oxidizer	The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to § 63.5725(d).	a. Collecting the combustion temperature data according to § 63.5725(d); b. reducing the data to 3-hour block averages; and c. maintaining the 3-hour average combustion temperature at or above the temperature limit.
2. Other control devices	An operating limit approved by the Administrator according to § 63.8(f).	a. Collecting parameter monitoring as approved by the Administrator according to § 63.8(f); and b. maintaining the parameters within the operating limits approved according to § 63.8(f).
3. Emission capture system that is a PTE according to § 63.5719(b).	a. The direction of the air flow at all times must be into the enclosure; and b. in any 3-hour period, either the average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minute; or c. the pressure drop across the enclosure must be at least 0.007 inch H_2O, as established in Method 204 of appendix M to 40 CFR part 51.	i. Collecting the direction of air flow, and either the facial velocity of air through all natural draft openings according to § 63.5725(f)(3) or the pressure drop across the enclosure according to § 63.5725(f)(4); and ii. reducing the data for facial velocity or pressure drop to 3-hour block averages; and iii. maintaining the 3-hour average facial velocity of air flow through all natural draft openings or the pressure drop at or above the facial velocity limit or pressure drop limit, and maintaining the direction of air flow into the enclosure at all times.
4. Emission capture system that is not a PTE according to § 63.5719(b).	a. The average gas volumetric flow rate or duct static pressure in each duct between a capture device and add-on control device inlet in any 3-hour period must not fall below the average volumetric flow rate or duct static pressure limit established for that capture device according to § 63.5725(f)(5); and b. the average pressure drop across an opening in each enclosure in any 3-hour period must not fall below the average pressure drop limit established for that capture device according to § 63.5725(f)(5).	i. Collecting the gas volumetric flow rate or duct static pressure for each capture device according to § 63.5725(f)(1) and (3); ii. reducing the data to 3-hour block averages; iii. maintaining the 3-hour average gas volumetric flow rate or duct static pressure for each capture device at or above the gas volumetric flow rate or duct static pressure limit; iv. collecting data for the pressure drop across an opening in each enclosure according to § 63.5725(f)(2) and (4); v. reducing the data to 3-hour block averages; and vi. maintaining the 3-hour average pressure drop across the opening for each enclosure at or above the gas volumetric flow rate or duct static pressure limit.

Table 5 to Subpart VVVV—Default Organic HAP Contents of Solvents and Solvent Blends

As specified in § 63.5758(a)(6), when detailed organic HAP content data for solvent blends are not available, you may use the values in the following table:

Solvent/solvent blend	CAS No.	Average organic HAP content, percent by mass	Typical organic HAP, percent by mass
1. Toluene	108–88–3	100	Toluene.
2. Xylene(s)	1330–20–7	100	Xylenes, ethylbenzene.
3. Hexane	110–54–3	50	n-hexane.
4. n-hexane	110–54–3	100	n-hexane.
5. Ethylbenzene	100–41–4	100	Ethylbenzene.
6. Aliphatic 140	.....	0	None.
7. Aromatic 100	.....	2	1% xylene, 1% cumene.
8. Aromatic 150	.....	9	Naphthalene.
9. Aromatic naptha	64742–95–6	2	1% xylene, 1% cumene.
10. Aromatic solvent	64742–94–5	10	Naphthalene.
11. Exempt mineral spirits	8032–32–4	0	None.
12. Ligroines (VM & P)	8032–32–4	0	None.
13. Lactol spirits	64742–89–6	15	Toluene.
14. Low aromatic white spirit	64742–82–1	0	None.
15. Mineral spirits	64742–88–7	1	Xylenes.
16. Hydrotreated naphtha	64742–48–9	0	None.

Solvent/solvent blend	CAS No.	Average organic HAP content, percent by mass	Typical organic HAP, percent by mass
17. Hydrotreated light distillate	64742–47–8	0.1	Toluene.
18. Stoddard solvent	8052–41–3	1	Xylenes.
19. Super high-flash naphtha	64742–95–6	5	Xylenes.
20. Varol® solvent	8052–49–3	1	0.5% xylenes, 0.5% ethyl benzene.
21. VM & P naphtha	64742–89–8	6	3% toluene, 3% xylene.
22. Petroleum distillate mixture	68477–31–6	8	4% naphthalene, 4% biphenyl.

Table 6 to Subpart VVVV—Default Organic HAP Contents of Petroleum Solvent Groups

As specified in § 63.5758(a)(6), when detailed organic HAP content data for solvent blends are not available, you may use the values in the following table:

Solvent type	Average organic HAP content, percent by mass	Typical organic HAP, percent by mass
Aliphatic (Mineral Spirits 135, Mineral Spirits 150 EC, Naphtha, Mixed Hydrocarbon, Aliphatic Hydrocarbon, Aliphatic Naptha, Naphthol Spirits, Petroleum Spirits, Petroleum Oil, Petroleum Naphtha, Solvent Naphtha, Solvent Blend.).	3	1% Xylene, 1% Toluene, and 1% Ethylbenzene.
Aromatic (Medium-flash Naphtha, High-flash Naphtha, Aromatic Naphtha, Light Aromatic Naphtha, Light Aromatic Hydrocarbons, Aromatic Hydrocarbons, Light Aromatic Solvent.).	6	4% Xylene, 1% Toluene, and 1% Ethylbenzene.

Table 7 to Subpart VVVV—Applicability and Timing of Notifications

As specified in § 63.5761(a), you must submit notifications according to the following table:

If your facility—	You must submit—	By this date—
1. Is an existing source subject to this subpart	An initial notification containing the information specified in § 63.9(b)(2).	No later than the dates specified in § 63.9(b)(2).
2. Is a new source subject to this subpart	The notifications specified in § 63.9(b) (3) to (5).	No later than the dates specified § 63.9(b)(4) and (5).
3. Qualifies for a compliance extension as specified in § 63.9(c).	A request for a compliance extension as specified in § 63.9(c).	No later than the dates specified in § 63.6(i).
4. Is complying with organic HAP content limits, application equipment requirements; or MACT model point value averaging provisions.	A notification of compliance status as specified in § 63.9(h).	No later than 30 calendar days after the end of the first 12-month averaging period after your facility's compliance date.
5. Is complying by using an add-on control device.	a. notification of intent to conduct a performance test as specified in § 63.9(e).	No later than the date specified in § 63.9(e).
	b. A notification of the date for the continuous monitoring system performance evaluation as specified in § 63.9(g).	With the notification of intent to conduct a performance test.
	c. A notification of compliance status as specified in § 63.9(h).	No later than 60 calendar days after the completion of the add-on control device performance test and continuous monitoring system performance evaluation.

Table 8 to Subpart VVVV—Applicability of General Provisions (40 CFR Part 63, Subpart A) to Subpart VVVV

As specified in § 63.5773, you must comply with the applicable requirements of the General Provisions according to the following table:

Citation	Requirement	Applies to subpart VVVV	Explanation
§ 63.1(a)	General Applicability	Yes.	
§ 63.1(b)	Initial Applicability Determination	Yes.	
§ 63.1(c)(1)	Applicability After Standard Established	Yes.	
§ 63.1(c)(2)		Yes	Area sources are not regulated by subpart VVVV.
§ 63.1(c)(3)		No	[Reserved]
§ 63.1(c)(4)–(5)		Yes.	
§ 63.1(d)		No	[Reserved]
63.1(e)	Applicability of Permit Program	Yes.	
§ 63.2	Definitions	Yes	Additional definitions are found in § 63.5779.
§ 63.3	Units and Abbreviations	Yes.	
§ 63.4(a)	Prohibited Activities	Yes.	
§ 63.4(b)–(c)	Circumvention/Severability	Yes.	
§ 63.5(a)	Construction/Reconstruction	Yes.	
§ 63.5(b)	Requirements for Existing, Newly Constructed, and Reconstructed Sources.	Yes.	

Citation	Requirement	Applies to subpart VVVV	Explanation
§ 63.5(c)		No	[Reserved]
§ 63.5(d)	Application for Approval of Construction/ Reconstruction.	Yes.	
§ 63.5(e)	Approval of Construction/Reconstruction	Yes.	
§ 63.5(f)	Approval of Construction/Reconstruction Based on prior State Review.	Yes.	
§ 63.6(a)	Compliance with Standards and Maintenance Requirements—Applicability.	Yes.	
§ 63.6(b)	Compliance Dates for New and Reconstructed Sources.	Yes	§ 63.695 specifies compliance dates, including the compliance date for new area sources that become major sources after the effective date of the rule.
§ 63.6(c)	Compliance Dates for Existing Sources	Yes	§ 63.5695 specifies compliance dates, including the compliance date for existing area sources that become major sources after the effective date of the rule.
§ 63.6(d)		No	[Reserved]
§ 63.6(e)(1)–(2)	Operation and Maintenance Requirements.	No	Operating requirements for open molding operations with add-on controls are specified in § 63.5725.
§ 63.6(e)(3)	Startup, Shut Down, and Malfunction Plans.	Yes	Only sources with add-on controls must complete startup, shutdown, and malfunction plans.
§ 63.6(f)	Compliance with Nonopacity Emission Standards.	Yes.	
§ 63.6(g)	Use of an Alternative Nonopacity Emission Standard.	Yes.	
§ 63.6(h)	Compliance with Opacity/Visible Emissions Standards.	No	Subpart VVVV does not specify opacity or visible emission standards.
§ 63.6(i)	Extension of Compliance with Emission Standards.	Yes.	
§ 63.6(j)	Exemption from Compliance with Emission Standards.	Yes.	
§ 63.7(a)(1)	Performance Test Requirements	Yes.	
§ 63.7(a)(2)	Dates for performance tests	No	§ 63.5716 specifies performance test dates.
§ 63.7(a)(3)	Performance testing at other times	Yes.	
§ 63.7(b)–(h)	Other performance testing requirements	Yes.	
§ 63.8(a)(1)–(2)	Monitoring Requirements—Applicability	Yes	All of § 63.8 applies only to sources with add-on controls. Additional monitoring requirements for sources with add-on controls are found in § 63.5725.
§ 63.8(a)(3)		No	[Reserved]
§ 63.8(a)(4)		No	Subpart VVVV does not refer directly or indirectly to § 63.11.
§ 63.8(b)(1)	Conduct of Monitoring	Yes.	
§ 63.8(b)(2)–(3)	Multiple Effluents and Multiple Continuous Monitoring Systems (CMS).	Yes	Applies to sources that use a CMS on the control device stack.
§ 63.8(c)(1)–(4)	Continuous Monitoring System Operation and Maintenance.	Yes.	
§ 63.8(c)(5)	Continuous Opacity Monitoring Systems (COMS).	No	Subpart VVVV does not have opacity or visible emission standards.
§ 63.8(c)(6)–(8)	Continuous Monitoring System Calibration Checks and Out-of-Control Periods.	Yes.	
§ 63.8(d)	Quality Control Program	Yes.	
§ 63.8(e)	CMS Performance Evaluation	Yes.	
§ 63.8(f)(1)–(5)	Use of an Alternative Monitoring Method	Yes.	
§ 63.8(f)(6)	Alternative to Relative Accuracy Test	Yes	Applies only to sources that use continuous emission monitoring systems (CEMS).
§ 63.8(g)	Data Reduction	Yes	
§ 63.9(a)	Notification Requirements—Applicability	Yes.	
§ 63.9(b)	Initial Notifications	Yes	
§ 63.9(c)	Request for Compliance Extension	Yes.	
§ 63.9(d)	Notification That a New Source Is Subject to Special Compliance Requirements.	Yes.	
§ 63.9(e)	Notification of Performance Test	Yes	Applies only to sources with add-on controls.
§ 63.9(f)	Notification of Visible Emissions/Opacity Test.	No	Subpart VVVV does not have opacity or visible emission standards.

Citation	Requirement	Applies to subpart VVVV	Explanation
§ 63.9(g)(1)	Additional CMS Notifications—Date of CMS Performance Evaluation.	Yes	Applies only to sources with add-on controls.
§ 63.9(g)(2)	Use of COMS Data	No	Subpart VVVV does not require the use of COMS.
§ 63.9(g)(3)	Alternative to Relative Accuracy Testing	Yes	Applies only to sources with CEMS.
§ 63.9(h)	Notification of Compliance Status	Yes.	
§ 63.9(i)	Adjustment of Deadlines	Yes.	
§ 63.9(j)	Change in Previous Information	Yes.	
§ 63.10(a)	Recordkeeping/Reporting—Applicability	Yes.	
§ 63.10(b)(1)	General Recordkeeping Requirements	Yes	§§ 63.567 and 63.5770 specify additional recordkeeping requirements.
§ 63.10(b)(2)(i)–(xi)	Recordkeeping Relevant to Startup, Shutdown, and Malfunction Periods and CMS.	Yes	Applies only to sources with add-on controls.
§ 63.10(b)(2)(xii)–(xiv)	General Recordkeeping Requirements	Yes.	
§ 63.10(b)(3)	Recordkeeping Requirements for Applicability Determinations.	Yes	§ 63.5686 specifies applicability determinations for non-major sources.
§ 63.10(c)	Additional Recordkeeping for Sources with CMS.	Yes	Applies only to sources with add-on controls.
§ 63.10(d)(1)	General Reporting Requirements	Yes	§ 63.5764 specifies additional reporting requirements.
§ 63.10(d)(2)	Performance Test Results	Yes	§ 63.5764 specifies additional requirements for reporting performance test results.
§ 63.10(d)(3)	Opacity or Visible Emissions Observations.	No	Subpart VVVV does not specify opacity or visible emission standards.
§ 63.10(d)(4)	Progress Reports for Sources with Compliance Extensions.	Yes.	
§ 63.10(d)(5)	Startup, Shutdown, and Malfunction Reports.	Yes	Applies only to sources with add-on controls.
§ 63.10(e)(1)	Additional CMS Reports—General	Yes	Applies only to sources with add-on controls.
§ 63.10(e)(2)	Reporting Results of CMS Performance Evaluations.	Yes	Applies only to sources with add-on controls.
§ 63.10(e)(3)	Excess Emissions/CMS Performance Reports.	Yes	Applies only to sources with add-on controls.
§ 63.10(e)(4)	COMS Data Reports	No	Subpart VVVV does not specify opacity or visible emission standards.
§ 63.10(f)	Recordkeeping/Reporting Waiver	Yes.	
§ 63.11	Control Device Requirements—Applicability.	No	Facilities subject to subpart VVVV do not use flares as control devices.
§ 63.12	State Authority and Delegations	Yes	§ 63.5776 lists those sections of subpart A that are not delegated.
§ 63.13	Addresses	Yes.	
§ 63.14	Incorporation by Reference	Yes.	
§ 63.15	Availability of Information/Confidentiality	Yes.	

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