This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by June 20, 2003. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements (*See* section 307(b)(2)).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Hydrocarbons, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: April 10, 2003.

Richard E. Greene,

Regional Administrator, Region 6.

■ Part 52, chapter I, title 40 of the Code of Federal Regulations is amended as follows:

PART 52—[AMENDED]

■ 1. The authority citation for part 52 continues to read as follows:

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

Subpart T—Louisiana

■ 2. Section 52.975 is amended by adding paragraph (g) to read as follows:

§ 52.975 Redesignations and maintenance plans; ozone.

* * * * *

(g) Approval.—The Louisiana Department of Environmental Quality (LDEQ) submitted to the EPA a request on December 4, 2000, to revise the Louisiana SIP for Beauregard, St. Mary, Lafayette, and Grant Parishes and the New Orleans Consolidated Metropolitan Statistical Area ozone maintenance area. The revision involves changes to the approved contingency plans. The contingency measures and the schedule for implementation satisfy the requirements of section 175A(d) of the Act. The EPA therefore approved this request on June 20, 2003.

[FR Doc. 03–9619 Filed 4–18–03; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[OAR–2003–0003: FRL–7461–7]

RIN 2060–AE79

National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates national emissions standards for hazardous air pollutants (NESHAP) for new and existing reinforced plastic composites production facilities. The NESHAP regulate production and ancillary processes used to manufacture products with thermoset resins and gel coats. Reinforced plastic composites production facilities emit hazardous air pollutants (HAP), such as styrene, methyl methacrylate (MMA), and methylene chloride (dichloromethane). These HAP have adverse health effects including headache, fatigue, depression, irritation of skin, eyes, and mucous membranes. Methylene chloride has been classified as a probable human carcinogen. The NESHAP will implement section 112(d) of the Clean Air Act (CAA) by requiring all major sources in this category to meet HAP emissions 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 approximately 7,682 tons per year (tpy) (43 percent).

EFFECTIVE DATE: April 21, 2003.

ADDRESSES: *Docket.* Docket ID No. OAR–2003–0003 (formerly Docket No. A–94–52) contains supporting information used in developing the standards. The docket is available for public viewing at the Office of Air and Radiation Docket and Information Center (Air Docket) in the EPA Docket Center, EPA West, Room B108, 1301 Constitution Avenue NW., Washington, DC.

FOR FURTHER INFORMATION CONTACT: For further information concerning applicability and rule determinations, contact the appropriate State or local agency representative. For information concerning the analyses performed in developing the NESHAP, contact Keith Barnett, U.S. EPA, Emission Standards Division, Minerals and Inorganic Chemicals Group, C504–05, Research Triangle Park, North Carolina 27711, (919) 541–5605, *barnett.keith@epa.gov.*

SUPPLEMENTARY INFORMATION: *Docket.* We have established an official public docket for this action under Docket ID No. OAR–2003–0003 (formerly Docket No. A–94–52). The docket is an organized and complete file of 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, excluding interagency review materials, 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) 566–1742. A reasonable fee may be charged for copying docket materials.

Electronic Docket Access. You may access the final rule electronically through the EPA Internet under the ''**Federal Register**'' listings at *http://www.epa.gov/fedrgstr/.*

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

Worldwide Web (WWW). In addition to being available in the docket, an electronic copy of 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 promulgated rules at *http://www.epa.gov/ttn/oarpg.* The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541–5384.

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

Category	NAICS code	SIC code	Examples of regulated entities
Industry	325211	2821	Reinforced plastic composites production facilities that manufacture intermediate and/or final products using styrene containing thermoset resins and gel coats.
	326122	3084	
	325991	3087	
	326191	3088	
		3089	
	327991	3281	
	327993	3296	
	332998	3431	
	33312	3531	
	33651	3531	
	335311	3612	
	335313	3613	
	335312	3621	
	33422	3663	
	336211	3711	
	336112	3711	
	336211	3713	
	33651		
	33653	3714	
	336399	3714	
	33612	3716	
	336213	3728	
	336413	3743	
	336214	3792	
		3999	
Federal Government			Federally owned facilities that manufacture intermediate and/or final products using styrene containing thermoset resins and gel coats.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your facility is regulated by this action, you should examine the applicability criteria in §§ 63.5785 and 63.5787 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 Reinforced Plastic Composites Manufacturing were proposed on August 2, 2001 (66 FR 40324). 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 only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by June 20, 2003. Under section 307(d)(7)(B) of the CAA, only an objection to a rule or procedure raised with reasonable specificity during the period for public comment can be raised during judicial review. Moreover, under section 307(b)(2) of the CAA, the requirements established by the final rule may not be challenged separately in any civil or criminal proceeding brought to enforce these requirements.

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

I. Introduction
- A. What is the purpose of NESHAP?
- B. What is the source of authority for development of NESHAP?
- C. What processes and operations are included in the Reinforced Plastic Composites Production source category?

II. Summary of the Final NESHAP
- A. What source categories and subcategories are affected by the final NESHAP?
- B. What are the primary sources of HAP emissions and what are the emissions?
- C. What is the affected source?
- D. What are the HAP emissions limits, operating limits, and other standards?
- E. What are the HAP emissions factor equations in Table 1 to subpart WWWW of part 63, and how are they used in the final NESHAP?
- F. When would I need to comply with the final NESHAP?
- G. What are the options for demonstrating compliance?
- H. What are the testing and initial compliance requirements?
- I. What are the continuous compliance requirements?
- J. What are the notification, reporting, and recordkeeping requirements?

III. Summary of Environmental, Energy, and Economic Impacts
- A. What facilities are affected by the final NESHAP?
- B. What are the air quality impacts?
- C. What are the water quality impacts?
- D. What are the solid and hazardous waste impacts?
- E. What are the energy impacts?
- F. What are the cost impacts?
- G. What are the economic impacts?

IV. Summary of Changes Since Proposal
- A. Above-the-Floor Capture and Control Requirements for Existing Sources
- B. Replacing the Point Value Equations with HAP Emissions Factor Equations Based on the Unified Emissions Factors, and Changes to Centrifugal Casting HAP Emissions Factors
- C. MACT Floors for Existing Sources
- D. Cleaning
- E. Compression/Injection Molding
- F. Averaging Provisions
- G. Pultrusion Compliance Options
- H. Applicability
- I. Potential Overlap with the Boat Manufacturing NESHAP (40 CFR Part 63, Subpart VVVV)
- J. Determination of Resin and Gel Coat HAP Content
- K. New Source MACT Floors

V. Summary of Responses to Major Comments

VI. Relationship of the Final NESHAP to Other NESHAP and the CAA Operating Permits Program
- A. National Emissions Standards for Closed Vent Systems, Control Devices, Recovery Devices, and Routing to a Fuel Gas System of a Process (40 CFR Part 63, Subpart SS)
- B. NESHAP for Boat Manufacturing (40 CFR Part 63, Subpart VVVV)
- C. NESHAP for Plastic Parts and Products (Surface Coating)
- D. Operating Permit Program

VII. Statutory and Executive Order Reviews

I. Introduction

A. What Is the Purpose of NESHAP?

The purpose of the final NESHAP is to protect the public health by reducing emissions of HAP from Reinforced Plastic Composite Manufacturing facilities.

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

Section 112 of the CAA requires us to list categories and subcategories of major sources and area sources of HAP and to establish NESHAP for the listed source categories and subcategories. Reinforced Plastic Composites Production was included on the initial list of source categories published on July 16, 1992 (57 FR 31576). Major sources of HAP are those that have the potential to emit 10 tpy or more of any one HAP or 25 tpy or more of any combination of HAP.

The CAA requires NESHAP to reflect the maximum degree of reduction in emissions of HAP that is achievable. This level of control is commonly referred to as the MACT.

The MACT floor is the minimum control level allowed for NESHAP. This concept appears in section 112(d)(3) of the CAA. For new sources, the MACT floor cannot be less stringent than the HAP emissions control that is achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than standards for new sources, but they cannot be less stringent than the average HAP emissions limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources).

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

C. What Processes and Operations Are Included in the Reinforced Plastic Composites Production Source Category?

The Reinforced Plastic Composites Production source category involves the production of plastic products from cross-linking resins, usually in combination with reinforcing materials and inorganic fillers. These products may have an outer surface produced with a styrene-containing gel coat. The production of products that do not contain reinforcing materials is also included in this category, as well as the production of intermediate compounds that are later used to make the final plastic products. These non-reinforced products were included because they are produced using the same types of resins, have similar HAP emissions characteristics, and would use similar HAP emissions controls. This source category is limited to those resins and gel coats which contain styrene, either by itself or with a combination of other monomers or solvents.

There are a wide variety of operations that use styrene-containing resins to make thermoset plastics. Such manufacturing operations include manual resin application, mechanical resin application, filament application, gel coat application, compression/injection molding, resin transfer molding, centrifugal casting, continuous lamination/casting, polymer casting, pultrusion, bulk molding compound (BMC) manufacturing, and sheet molding compound (SMC) manufacturing. There are also ancillary operations such as cleaning, mixing, repair, and HAP-containing materials storage, that occur in conjunction with these manufacturing operations. Many facilities will use multiple operations in manufacturing their products.

This source category also includes some repair operations that take place at a manufacturing facility, such as repairs of parts or products that are manufactured at the same facility that must be repaired due to defects or damage that occur during manufacturing, or repairs of parts that were originally manufactured at that location and have been returned for repair due to defects in the original manufacture or damage in shipment. No other types of repair operations are included in this source category. Facilities that perform non-routine manufacture of reinforced plastic composites parts solely to replace parts of a reinforced plastic composite product that has been in use are not considered to be manufacturing facilities, and repair operations at these types of facilities are not part of this source category. See § 63.5935 of the final rule for the definition of non-routine manufacture. We believe that repair operations that are collocated with manufacturing operations that originally produce the reinforced plastic composites being repaired use the same materials as the manufacturing processes. Repair operations that are not collocated may use different materials and application techniques.

II. Summary of the Final NESHAP

A. What Source Categories and Subcategories Are Affected by the Final NESHAP?

Today's final rule applies to the Reinforced Plastic Composites Production source category. We developed subcategories based on size (*i.e.,* tpy of HAP emitted) in defining the new source MACT floors. These subcategories are sources that emit 100 tpy or more from open molding, pultrusion, centrifugal casting, continuous lamination/casting, SMC and BMC manufacturing, and mixing operations; and all other new sources. The new source MACT floors incorporate add-on controls for sources in the first subcategory, except for facilities producing large parts, and pollution prevention for other new sources.

The floors for existing sources are mainly based on pollution prevention, not add-on controls. Where floors are based mainly on pollution-prevention control techniques, we did not subcategorize by size. However, we did segregate existing sources by resin application technique, resin type, and final products, and developed separate floors for each process/product grouping.

B. What Are the Primary Sources of HAP Emissions and What Are the Emissions?

The primary source of HAP emissions from the Reinforced Plastic Composites Production source category is the evaporation of styrene and other organic liquid HAP contained in the resin during the application and/or curing of the resin. Since styrene participates in the curing reaction, not all of it is emitted. Organic HAP emissions also occur during ancillary operations such as cleaning, mixing, repair, and HAP containing materials storage. Although some gel coats or resins may contain inorganic HAP, such as lead, in resin solids or pigments, we have no data to indicate the inorganic HAP are emitted from the production process. Therefore, only organic HAP are addressed by the final NESHAP.

Total baseline HAP emissions from the Reinforced Plastic Composites Production source category are approximately 18,000 tpy. The HAP emissions from spray lay-up and gel coating constitute approximately 52 percent and 23 percent of the total baseline HAP emissions, respectively. The remaining HAP emissions are primarily from hand lay-up/bucket and tool application, compression molding/injection molding, filament application, SMC manufacturing, and centrifugal casting.

C. What Is the Affected Source?

The affected source is the combination of all operations regulated under these standards at a reinforced plastic composites production facility. The following regulated operations are typically performed at reinforced plastic composites production facilities and are part of the affected source: open molding, closed molding, centrifugal casting, continuous lamination/casting, polymer casting, pultrusion, SMC manufacturing, equipment cleaning, mixing, BMC manufacturing, repair, and storage of HAP-containing materials. Repair operations are also included as part of the affected source if the repair is made to a part manufactured at that location.

D. What Are the HAP Emissions Limits, Operating Limits, and Other Standards?

We are promulgating the requirements of the final NESHAP in the form of HAP emissions limits (*i.e.,* HAP emissions factors, mass rate, or percent reduction), operating limits, and work practice standards. Work practice standards include design, equipment, work practices, and operational standards.

The final NESHAP contain a HAP emissions threshold that distinguishes between sources that typically can meet the HAP emissions limits using pollution prevention, and those that must use add-on controls. This threshold is called the ''100 tpy threshold.'' For existing sources, you determine if you are below, above, or equal to the 100 tpy threshold by summing all HAP emissions from centrifugal casting and continuous lamination/casting operations at the source. In determining HAP emissions from centrifugal casting operations, only HAP emissions from venting of the centrifugal casting mold during spinning and/or curing are considered. The HAP emissions that occur from application of resin or gel coat to an open centrifugal casting mold are considered to be open molding HAP emissions. The HAP emissions from other operations or processes are not included because the 100 tpy threshold does not apply to other operations or processes.

For new sources, you determine if you are below, above, or equal to the 100 tpy threshold by summing all HAP emissions from open molding, pultrusion, SMC and BMC manufacturing, centrifugal casting, continuous lamination/casting, and mixing operations at the source. The HAP emissions from closed molding, cleaning, repair and HAP-containing materials storage are not used in threshold determinations. In determining HAP emissions from centrifugal casting operations, only HAP emissions from venting of the centrifugal casting mold are included. The HAP emissions that occur from application of resin or gel coat to an open centrifugal casting mold are considered to be open molding HAP emissions.

The requirements for new and existing sources that are below the 100 tpy threshold are based on the MACT floor level of control. These requirements are summarized in the following table:

TABLE 1.—SUMMARY FOR EXISTING SOURCES, AND NEW SOURCES BELOW THE 100 TPY HAP EMISSIONS THRESHOLD

If your operation type is . . .	And you use . . .	MACT for existing facilities and new facilities that are below the 100 tpy threshold is . . .
1. Open molding—corrosion-resistant and/or high strength (CR/HS).	a. mechanical resin application	112 lb/ton.
	b. filament application	171 lb/ton.
	c. manual resin application	123 lb/ton.
2. Open molding—non-CR/HS	a. mechanical resin application	87 lb/ton.
	b. filament application	188 lb/ton.
	c. manual resin application	87 lb/ton.
3. Open molding—tooling	a. mechanical resin application	254 lb/ton.
	b. manual resin application	157 lb/ton.
4. Open molding—low-flame spread/low-smoke products.	a. mechanical resin application	497 lb/ton.
	b. filament application	270 lb/ton.
	c. manual resin application	238 lb/ton.
5. Open molding—shrinkage controlled resin	a. mechanical resin application	354 lb/ton.
	b. filament application	215 lb/ton.
	c. manual resin application	180 lb/ton.
6. Open molding—gel coat [b]	a. tooling gel coating	437 lb/ton.
	b. white/off white pigmented gel coating	267 lb/ton.
	c. all other pigmented gel coating	377 lb/ton.
	d. CR/HS or high performance gel coat	605 lb/ton.
	e. fire retardant gel coat	854 lb/ton.
	f. clear production gel coat	522 lb/ton.
7. Centrifugal casting—CR/HS [c]	N/A	25 lb/ton.
8. Centrifugal casting—non-CR/HS [c]	N/A	20 lb/ton.
9. Pultrusion [d]	N/A	Reduce total HAP emissions by at least 60 weight percent.
10. Continuous lamination/casting	N/A	Reduce total HAP emissions by at least 58.5 weight percent or not exceed a HAP emissions limit of 15.7 lbs of HAP per ton of neat resin plus and neat gel coat plus.

TABLE 1.—SUMMARY FOR EXISTING SOURCES, AND NEW SOURCES BELOW THE 100 TPY HAP EMISSIONS THRESHOLD—Continued

If your operation type is . . .	And you use . . .	MACT for existing facilities and new facilities that are below the 100 tpy threshold is . . .
11. A closed molding operation using compression/injection molding.		Uncover, unwrap or expose only one charge per mold cycle per compression/injection molding machine. For machines with multiple molds, one charge means sufficient material to fill all molds for one cycle. For machines with robotic loaders, no more than one charge may be exposed prior to the loader. For machines fed by hoppers, sufficient material may be uncovered to fill the hopper. Hoppers must be closed when not adding materials. Materials may be uncovered to feed to slitting machines. Materials must be recovered after slitting.
12. A cleaning operation		Do not use cleaning solvents that contain HAP, except that HAP containing materials may be used in closed systems, and to clean cured resin from application equipment. Application equipment includes any equipment that directly contacts resin between storage and applying resin to the mold or reinforcement.
13. A HAP-containing materials storage operation.		Keep containers that store HAP-containing materials closed or covered except during the addition or removal of materials. Bulk HAP-containing materials storage tanks may be vented as necessary for safety.
14. A SMC manufacturing operation		Close or cover the resin delivery system to the doctor box on each SMC manufacturing machine. The doctor box itself may be open.
15. A SMC manufacturing operation		Use a nylon containing film or a film with an equal or lower permeability to styrene compared to a nylon containing film to enclose SMC.
16. A mixing or BMC manufacturing operation [d]		Use mixer covers with no visible gaps present in the mixer covers. Gaps of up to 1 inch are permissible around mixer shafts and any required instrumentation.
17. A mixing or BMC manufacturing operation [e]		Do not actively vent mixers to the atmosphere while the mixing agitator is turning.
18. A mixing or BMC manufacturing operation [e]		Keep the mixer covers closed during mixing except when adding materials to the mixing vessels.
19. A new or existing pultrusion operation manufacturing parts with 1000 or more reinforcements and a cross section area of 60 square inches or more that is not subject to the 95 percent HAP emissions requirement.		i. not allow vents from the building ventilation system, or local or portable fans to blow directly on or across the wet-out area(s). ii. not permit point suction of ambient air in the wet-out area(s) unless that air is directed to a control device. iii. use devices such as deflectors, baffles, and curtains when practical to reduce air flow velocity across the wet-out area(s). iv. direct any compressed air exhausts away from resin and wet-out area(s). v. convey resin collected from drip-off pans or other devices to reservoirs, tanks, or sumps via covered troughs, pipes, or other covered conveyance that shields the resin from the ambient air. vi. cover all reservoirs, tanks, sumps, or HAP-containing materials storage vessels except when they are being charged or filled. vii. cover or shield from ambient air resin delivery systems to the wet-out area(s) from reservoirs, tanks, or sumps where practical.

[a] HAP emissions limits for open molding and centrifugal casting expressed as lb/ton are calculated using the equations shown in Table 1 to subpart WWWW of part 63. You must be at or below these values based on a 12-month rolling average.

[b] These limits are for spray application of gel coat. Manual gel coat application may be included as part of spray gel coat application for compliance purposes using the same HAP emissions factor equation and HAP emissions limit.

[c] Centrifugal casting operations where the resin is injected into the mold and the mold is completely closed during spinning and curing may be treated as closed molding operations.

[d] Pultrusion machines that produce parts with 1000 or more reinforcements and a cross sectional area of 60 inches or more are not subject to this requirement. Their requirement is the work practice of air flow management reduction.

[e] Containers of 5 gallons or less may be open when active mixing is taking place, or during periods when they are in process (*i.e.*, they are actively being used to apply resin). For polymer casting mixing operations, containers with a surface area of 500 square inches or less may be open while active mixing is taking place.

For existing sources that are equal to or above the 100 tpy HAP emissions threshold, centrifugal casting and continuous lamination/casting operations meet an above-the-floor requirement based on 95 percent control of HAP emissions.

The requirements for new sources that are equal to or above the 100 tpy HAP emissions threshold are also based on the floor level of control. The floor level of control for these sources is a 95 percent reduction of HAP emissions for open molding, pultrusion, SMC and BMC manufacturing, centrifugal casting, continuous lamination/casting, and mixing operations with one exception. For open molding and pultrusion operations at new sources that produce large parts, the floor level of control is the same as existing sources shown in the previous table. All other operations meet the requirements shown in the previous table.

In developing final requirements for reinforced plastic composites affected sources, we have provided an alternative format where possible. For example, a facility meeting a 95 percent HAP emissions reduction requirement for open molding processes can alternatively meet a HAP emissions limit. We have also provided alternatives for meeting the limits for continuous lamination/casting and SMC manufacturing operations.

E. What Are the HAP Emissions Factor Equations in Table 1 to Subpart WWWW of Part 63, and How Are They Used in the Final NESHAP?

Table 1 to subpart WWWW of part 63 presents a series of HAP emissions factor equations for open molding and centrifugal casting operations. These equations are specific to the type of resin and gel application and HAP emissions reduction technique used. These equations allow you to calculate HAP emissions factors based on HAP content and application method for each material that you use. These HAP emissions factors are then averaged and compared to limits in the final standards to determine if your open molding and centrifugal casting operations are in compliance.

The HAP emissions factor equations for open molding are identical to HAP emissions equations developed by the composites industry called the Unified Emissions Factors (UEF) as they existed at the time of final rule development. These equations can also be combined with resin and gel coat use to determine HAP emissions rates. It should be noted that although the equations are identical to the UEF at the time the rule is finalized, for purposes of compliance, only the equations actually contained in Table 1 to subpart WWWW of part 63 may be used.

F. When Would I Need To Comply With the Final NESHAP?

We are requiring that all existing sources comply by April 21, 2006. Any source that commenced construction after August 2, 2001, at a site where there were no existing reinforced plastic composite operations is a new source. New affected sources that are now in operation must be in compliance on April 21, 2003. New affected sources that startup after April 21, 2003 must comply upon startup. Existing area sources that increase their HAP emissions or their potential to emit such that they become a major source of HAP must be in compliance within 3 years of the date they become a major source. New area sources that become major sources of HAP must comply upon becoming a major source. All open molding and centrifugal casting operations that comply by meeting a specified HAP emissions limit on a 12-month rolling average will have 1 year from the compliance date to demonstrate compliance.

We are allowing new and existing facilities 3 years to comply from the time their HAP emissions reach or exceed the applicability thresholds which require the installation of add-on controls, if these HAP emissions increases occur after their initial compliance date.

In addition, we have added a one-time exemption for facilities that exceed the 100 tpy threshold due to unusual circumstances. Facilities that apply for this exemption and subsequently exceed the threshold the next year, must comply within 3 years from the time their HAP emissions first exceeded the threshold. Because this is a one-time exemption, an exceedance in any future years would result in a requirement for compliance within 3 years of the subsequent exceedance.

G. What Are the Options for Demonstrating Compliance?

Today's final NESHAP provide several options for compliance for certain operations. We are providing these options to afford industry the flexibility to decide which method is best suited for each particular situation. Operations not listed in this section have only one option for demonstrating compliance.

For open molding and centrifugal casting operations, you determine compliance with the HAP emissions limits by determining HAP emissions factors for the operations at your facility, and comparing your HAP emissions factors to the appropriate HAP emission limits for each open molding and centrifugal casting operation. To determine your HAP emissions factor you may use the HAP emissions factor equations in Table 1 to subpart WWWW, or HAP emissions factors based on facility HAP emissions testing. For open molding operations at existing and new sources, the final rule allows you to choose to comply by meeting the individual HAP emissions limits shown in Table 3 to subpart WWWW of part 63 for each operation at your affected source, or by meeting the weighted average HAP emissions limit for all open molding operations at your affected source. In addition, if you produce parts with any combination of manual resin application, mechanical resin application, filament application, or centrifugal casting operations at your affected source, you can comply using the an alternative method shown in Table 7 to subpart WWWW of part 63. You determine the highest allowable HAP resin for each individual operation from Table 3 to subpart WWWW of part 63. This same resin can then be used in all open molding and centrifugal casting operations as shown in Table 7 to subpart WWWW of part 63.

For open molding and centrifugal casting operations where the rule would require you to meet a percent reduction, you could use an add-on control device to achieve the required reduction, or you may choose to meet a HAP emissions limit that corresponds to that particular operation's percent reduction.

For continuous lamination/casting operations at existing and new sources, we are allowing you to demonstrate that each continuous casting line and each continuous lamination line meets the appropriate standard in Table 3 to subpart WWWW of part 63, or § 63.5805(b) or (d) of the final rule. Alternatively, you can average all your continuous casting and continuous lamination lines together and demonstrate that they meet the appropriate standard. An additional alternative for sources that emit less than the 100 tpy threshold would be to capture your HAP emissions from your wet-out area in a permanent total enclosure that meets EPA's criteria, as specified in Method 204 of appendix M of 40 CFR part 51, and vent the captured wet-out HAP emissions through a closed vent system to a control device achieving 95 percent reduction of HAP emissions. Under the final rule, these alternatives can be used in combination to demonstrate compliance.

The standards for continuous lamination/casting operations are expressed as a percent reduction of HAP emissions. As an alternative, facilities can elect to meet a HAP emissions limit.

For existing and new pultrusion operations, you can capture and vent your HAP emissions to a control device that achieves the required percent reduction of HAP emissions. For all existing sources and for new sources that emit less than the 100 tpy threshold, you may use a wet-area enclosure with a resin drip collection system, direct die injection or preform injection systems that meet the criteria specified in § 63.5830 of the final rule to meet the 60 percent HAP emissions reduction requirement. For pultrusion machines that produce parts with 1000 or more reinforcements and a cross sectional area of 60 inches or more, you must implement the work practice standards in Table 4 to subpart WWWW of part 63.

For SMC manufacturing operations at new sources that exceed the 100 tpy threshold, we allow facilities to meet a 95 percent HAP emissions reduction requirement, or the HAP emissions limit specified in Table 5 to subpart WWWW of part 63.

H. What Are the Testing and Initial Compliance Requirements?

We are requiring you to conduct an initial performance test using specified EPA test methods on all affected sources which use a control device to achieve compliance. You must test at the inlet and outlet of the control device and using these results, calculate a percent reduction.

We are also requiring you to conduct a design evaluation, as specified by EPA Method 204 of appendix M of 40 CFR part 51, if you use permanent total enclosures to capture HAP emissions. If your enclosure does not meet the requirements for a permanent total enclosure, you must test the enclosure to determine the capture efficiency by EPA Methods 204B through E of appendix M of 40 CFR part 51 or an alternative method that meets the data quality objectives and lower confidence limit approaches contained in 40 CFR part 63, subpart KK. Test runs for EPA Methods 204B through E or alternative test methods must be at least 3 hours.

Prior to the initial performance test, owners and operators of affected sources would be required to install the parameter monitoring equipment to be used to demonstrate compliance with the operating limits. During the initial performance test, the owners and operators would use the parameter monitoring equipment to establish operating parameter limits.

I. What Are the Continuous Compliance Requirements?

If you use an add-on control device, we are requiring that you monitor and record the operating parameters established during the initial performance test, and calculate average operating parameter values averaged over the period of time specified in the final NESHAP to demonstrate continuous compliance with the operating limits.

If you use the HAP emissions equations in Table 1 to subpart WWWW of part 63 to demonstrate that you are maintaining a HAP emissions factor less than or equal to the appropriate HAP emissions limit listed in the final NESHAP, we are requiring that you calculate the HAP emissions factor one time if the resins or gel coats used in the operation remain the same, or if all the resins and gel coats used individually meet the applicable HAP emissions limit. You are required to calculate HAP emissions factors on a 12-month rolling average each month if the resin or gel coat varies between operations or varies over time, and not all resins or gel coats taken individually meet the required HAP emissions limit.

If you are complying with work practice standards, we are requiring that you demonstrate compliance with the work practice standards in the final NESHAP by performing the necessary work practices and by keeping a record certifying that you are in compliance with the work practices.

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

We are requiring that you submit Initial Notification, Notification of Performance Tests, and Notification of Compliance Status reports by the specified dates in the final NESHAP, which may vary depending on whether the affected source is new or existing.

You are also required to submit semiannual compliance reports. If you take action that is inconsistent with your approved startup, shutdown, and malfunction (SSM) plan, then you would need to submit SSM reports within 2 days of starting such action, and within 7 days of ending such action.

We are requiring that you keep a copy of each notification and report, along with supporting documentation for 5 years. Of this time, the 2 most recent years must be on-site. You must keep records related to SSM, records of performance tests, and records for each continuous parameter monitoring system. Under the final rule, if you must comply with the work practice standards, you also need to keep records certifying that you are in compliance with the work practices for 5 years. If you use the HAP emissions factor equations to demonstrate compliance, you must keep all data, assumptions, and calculations used to determine your HAP emissions factors. For new and existing continuous lamination/casting operations, you also must keep the following records when complying with the percent reduction or pound per ton requirements: All data, assumptions, and calculations used to determine the percent reduction or pounds per ton, as applicable; a brief description of the rationale for the assignment of an equation or factor to each formula; all data, assumptions, and calculations used to derive facility-specific HAP emissions estimations and factors; identification and rationale for the worst-case scenario; and documentation that the appropriate regulatory agency has approved all HAP emissions estimation equations and factors.

III. Summary of Environmental, Energy, and Economic Impacts

A. What Facilities Are Affected by the Final NESHAP?

There are approximately 435 existing facilities manufacturing reinforced plastic composites that are major sources and subject to the final NESHAP. The rate of growth for the reinforced plastic composites industry is estimated to be 84 new facilities over the next 5 years.

B. What Are the Air Quality Impacts?

The 1997 baseline HAP emissions from the reinforced plastic composites industry are approximately 18,000 tpy. The final NESHAP will reduce HAP from existing sources by 7,682 tpy, a reduction of 43 percent.

The final NESHAP will result in small increases in other air pollution emissions from combustion devices that will be installed in the next 5 years to comply with today's final rule. These increases result both from the combustion device directly, and from the electrical generating plants used to generate the electricity necessary to operate the add-on controls and associated air handling equipment. These emissions are estimated to be 2.3 tpy of sulfur oxides (SOx), 3.0 tpy of nitrogen oxides (NO_X), 4.9 tpy of carbon monoxide (CO), and 0.1 tpy of particulate matter (PM) emissions.

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 would 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 reinforced plastic composites industry by approximately 2,650 tpy. The decrease in solid waste is directly related to switching to nonatomized resin application equipment (*i.e.,* flowcoaters and resin rollers). Switching to nonatomized resin application equipment results in a decrease in overspray because of a greater transfer efficiency of resin to the part being manufactured. A decrease in resin 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 620 tpy, and that cured resin solid waste will decrease by approximately 2,030 tpy.

We project that the decreased overspray from nonatomized resin application equipment will result in a decreased usage of PPE, which also consequently reduces the amount of solid waste. When using nonatomized resin application equipment, workers typically wear less PPE than when using atomized 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 atomized to nonatomized spray guns may have a small increase of hazardous waste from the used nonatomized spray gun cleaning solvents. However, most facilities would not see an increase under the final rule, and the overall impact on the industry will be small relative to the solid waste reductions. Nearly all nonatomized spray guns 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 to nonatomized spray guns will use more solvent. Solvent usage should not change at facilities switching from internal-mix spray guns to nonatomized spray guns. 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 internal-mix spray guns.

We do not have adequate data to predict the potential solvent waste impact from switching to nonatomized spray guns. 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?

Energy impacts result from the final NESHAP because some facilities will be required to install add-on controls to meet certain HAP emissions limits or percent reduction requirements. We anticipate that these controls will be concentrator/oxidizer systems or thermal oxidizers. These controls increase energy requirements in two ways. First, all reinforced plastic composites facilities must ventilate work areas to maintain worker styrene exposure within acceptable limits. The ventilation systems typically exhaust air directly to the atmosphere. When an add-on control device is added to control HAP emissions, it creates an additional pressure drop for the ventilation system which, in turn, means that more electricity is required to operate system fans and to operate the control device itself. Second, fuel (usually natural gas) is required to supplement the oxidizer combustion process.

We determined that the overall energy demand for operations in the Reinforced Plastic Composites Production source category could increase by 10 million standard cubic feet per year of natural gas, and 0.6 million kilowatt hours of electricity per year as a result of the final rule. We determined this net increase based on the additional energy demand for control devices installed to meet the final standards. No information for comparison is available on the baseline energy consumption for this source category.

F. What Are the Cost Impacts?

We have estimated the industrywide capital costs for HAP emissions control equipment, including equipment such as open container covers, resin bath enclosures, capture systems, and control devices as $12.6 million for the 435 existing sources and $22.8 million for the 84 new sources. The capital costs include the costs to purchase and install the control equipment.

We have estimated the industrywide annual costs of the final rule are $21.5 million per year for the 435 existing sources and $7.7 million for the 84 new sources. Annual costs include fixed annual costs, such as reporting, recordkeeping and capital amortization, and variable annual costs such as natural gas. The estimated average cost of the final rule is $2,800 per ton of HAP emissions reductions for existing sources and $5,560 per ton of HAP emissions reductions for new sources.

G. What Are the Economic Impacts?

We conducted a detailed economic impact analysis to determine the market- and industry-level impacts associated with the final rule. We expect the aggregate price increase for reinforced plastic composites would be only 0.7 percent, or $0.03 per pound, as a result of the final rule. We project that directly affected producers would reduce total production by 1.7 percent, while producers not directly affected would increase their production by 0.7 percent. Markets for reinforced plastic composites used in corrosion-resistant products are expected to be more heavily impacted with price increases of roughly 1.6 percent and reductions in directly affected domestic production of almost 5 percent. The reason for more significant impacts in the corrosion-resistant market is that facilities in this market have higher average per-unit variable compliance costs. Corrosion-resistant product variable compliance costs are $0.13 per pound of product versus an industry average of $0.06 per pound.

In terms of industry impacts, we analyzed impacts for captive producers and merchant producers. Captive producers make composites for use by another part of their company in a larger product. Merchant producers sell their products on the open market, either to consumers or other businesses.

In our analysis, captive producers of reinforced plastic composites are expected to fully absorb their compliance costs, which is a conservative approach. We assess impacts as if captive producers are viewed as a profit center like a merchant producer but unable to pass on costs. This is done in lieu of an analysis attempting to estimate cost-pass through for the myriad of final products that use reinforced plastics. We assume merchant producers will attempt to pass through costs to their customers.

Through the market impacts described above, the final NESHAP create both gainers and losers within the merchant segment. Some merchant facilities are projected to experience profit increases with the final rule; however, the majority that continue operating are projected to lose profits. The economic impact analysis indicates that 36 out of 301 merchant facilities (12 percent) and 89 out of 466 product lines (19 percent) at these facilities are at risk of closure because of the final NESHAP. These facilities are believed to be small businesses. Note that this number is slightly higher than the estimate of facility closure at proposal, which was 10 percent. This change is not due to any change in stringency of the final rule as applied to small businesses. It is due the reduction in stringency of the final rule for large sources. More information on the measures we have taken to minimize the small business impacts may be found in the Regulatory Flexibility Act discussion in this preamble. Furthermore, the analysis indicates that ten of the 133 captive facilities (7.5 percent) may be at risk of closure if unable to pass on costs to their customers.

Based on the market analysis, the annual social costs of the final rule are projected to be $19.9 million. The social costs are slightly less than the engineering cost estimate of $21.5 million because producers pass on a portion of these costs to consumers through price increases in an effort to reduce their regulatory burden. These costs are distributed across the many consumers and producers of reinforced plastic composites. Directly affected producers, in aggregate, are expected to lose $6.2 million annually in profits, with those not subject to the final NESHAP gaining $18 million. The consumers of reinforced plastic composites are expected to lose $31.7 million due to higher prices and lower consumption levels associated with the final NESHAP. For more information on the economic analysis, consult the final economic impacts analysis document in the docket for this project.

IV. Summary of Changes Since Proposal

A. Above-the-Floor Capture and Control Requirements for Existing Sources

In the proposed rule, existing facilities that are a small business as defined by the Small Business Administration (SBA) regulations at 13 CFR 121.201, and that emitted 250 tpy or more of HAP, or existing facilities that are not a small business and emitted 100 tpy or more of HAP, from the combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC manufacturing, mixing, and BMC manufacturing operations, were required to reduce the total HAP emissions from these operations by at least 95 percent by weight. In the final rule, this requirement now only applies to centrifugal casting and continuous lamination/casting operations, and the threshold has been changed to 100 tpy for both large and small businesses. This reduced the number of facilities we estimated would have to meet an above-the-floor requirement from 34 to 3, reduced the industry annualized costs of the final NESHAP from $26.0 million per year to $21.5 million per year, and reduced the HAP emissions reduction estimate from 14,500 to 7,700 tpy. In addition, for centrifugal casting, the percent reduction requirement only applies to HAP emissions that are vented from the closed centrifugal casting mold. It does not apply to HAP emissions that occur from other operations such as pouring or spraying resin into a centrifugal casting mold while it is open.

B. Replacing the Point Value Equations With HAP Emissions Factor Equations Based on the Unified Emissions Factors, and Changes to Centrifugal Casting HAP Emissions Factors

In the proposed rule, we used a group of equations called point value equations to determine surrogate HAP emissions factors. These factors were then used to rank existing facilities to determine existing source MACT floors for open molding operations. However, we specified that the point value equations were not considered HAP emissions factors and, therefore, should not be used for HAP emissions reporting. This resulted in the potential for facilities to have to use two different sets of equations for HAP emissions reporting and MACT compliance determinations.

In the final rule, we have eliminated the point value equations and replaced them with HAP emissions factor equations that are identical to HAP emissions factor equations that are being used in this industry for HAP emissions calculations, called the Unified Emissions Factors. Therefore, facilities now will have the same equations for MACT compliance determinations and HAP emissions calculations for HAP emissions reports.

For centrifugal casting, we have retained the HAP emissions factor equation in the proposed rule for sources that blow heated air through the mold during spinning and curing. For other centrifugal casters, we have created a new HAP emissions factor equation based on more recent information. This new HAP emissions factor significantly changes the numerical value of the floor (pounds of HAP emissions per ton of resin used) from the value in the proposed rule. However, it did not change the floor facility or the level of control a facility would need to meet the floor.

These new HAP emissions factor equations were also used to re-rank existing facilities to establish the floor level of control for existing sources. Though this change did result in different floor values in lb/ton, it did not change the level of control actually required to meet the floor. However, as discussed below, our reanalysis did result in changes to some floors for other reasons.

C. MACT Floors for Existing Sources

There are several changes to the MACT floors for existing sources, and for new sources that emit less than 100 tpy for the combination of all open molding, centrifugal casting, pultrusion, SMC and BMC manufacturing, mixing, and continuous lamination/casting operations. These changes were a result of facilities submitting additional data that indicated our original analysis of their facility HAP emissions factors were in error, or out of date.

For noncorrosion-resistant resins applied using mechanical application, the proposed rule had different floors for filled and unfilled resins. The reason for separating filled and unfilled resins was that at the time of proposal, nonatomized resin application techniques were not available for filled resins. Since proposal, filled resins now can be applied using nonatomized spray. Therefore, we now have combined the two process/product groupings into one. Also, several facilities in this process/product grouping provided revised data. As a result, the floor level of control for noncorrosion-resistant resins using mechanical application is a HAP emissions limit of 87 lb/ton. This limit requires a resin with no more than 38.4 percent HAP applied using nonatomized mechanical resin application techniques. At proposal, facilities could use a 42.8 percent resin (filled) or a 38 percent HAP (unfilled) resin and nonatomized mechanical resin application.

For mechanical corrosion-resistant resin application, the revised floor is a HAP emissions limit of 112 lb/ton. This limit requires a resin with no more that 46.2 percent HAP and nonatomized mechanical resin application. At proposal, a resin HAP content of up to 48.3 percent was allowed if nonatomized mechanical resin application was used.

For manual application of tooling resin, the revised floor is 157 lb/ton. This allows a resin HAP content of 45.9 percent or less. At proposal, the maximum allowable HAP content was 39.9 percent.

For tooling gel coat the revised floor is 437 lb/ton. This limits gel coat HAP content to 40 percent of less. At proposal, the limit was 38 percent or less.

For SMC manufacturing, the work practices required in the proposed rule were use of nylon film, folding the edges of the film, and covering the doctor box. In the final rule, the requirements are a covered resin transport system to the doctor box and the use of nylon-containing film.

For pultrusion operations producing parts with 1000 or more reinforcements and a cross sectional area of 60 inches or more, we have changed the floor from 60 percent HAP emissions reduction to a work practice of air flow management.

In addition, we established three new floors for speciality resins and gel coats. These are shrinkage-controlled resins, fire retardant gel coats, and high performance gel coats. These speciality products were identified from comments received on the proposed rule. The new floors are shown in Table 3 to subpart WWWW of part 63.

D. Cleaning

In the proposed rule, we required that cleaning materials contain no HAP unless cleaning cured resin from application equipment. In the final rule, we have modified that requirement to allow HAP-containing cleaners to be used in closed systems such as closed tanks, and resin and gel coat delivery systems.

E. Compression/Injection Molding

In the proposed rule, we required that only one resin charge be uncovered at a time. We have clarified this requirement for the final rule to reflect that one charge may actually have to fill multiple molds. Also, we added a provision to allow the use of automated loaders and slitters. We also clarified that paste added to the mold and in-mold surface coatings are considered part of the closed molding operation.

F. Averaging Provisions

In the proposed rule, we allowed facilities to average across all open molding operations and all centrifugal casting operations. The average was based on a 12-month rolling average calculated monthly. In determining compliance, the average for each month was calculated and then the monthly averages were averaged over a 12-month period. In the final rule, the 12-month average is based on a weighted HAP emissions factor calculated from total resin and gel coat use over the 12-month period. This method will provide a more accurate value for the actual HAP emissions, in lb/ton, that the facility produced in the previous 12 months.

In the proposed rule, we did not allow pultrusion lines to average; each pultrusion machine had to meet the 60 percent reduction requirement for existing sources. In the final rule, we allow facilities to over control some lines, and under control (or leave uncontrolled) others, as long as the average reduction for all lines combined is 60 percent weighted by resin use. Also, we are allowing facilities to average the time that wet area enclosure covers are open across lines.

G. Pultrusion Compliance Options

In the proposed rule, we allowed pultrusion operations to use direct die injection as a compliance alternative to meet the 95 percent capture and control requirement. In the final rule, we are removing direct die injection as a compliance alternative because, based on industry data, it does not achieve 95 percent HAP emissions reduction. We still allow direct die injection as a compliance option to meet the 60 percent HAP emissions reduction requirement. We have also added another compliance option, preform injection, to meet a 60 percent HAP emissions reduction. We have also added another compliance option, airflow management work practices, for pultrusion machines that produce large parts as set forth in Table 4 to subpart WWWW of part 63.

H. Applicability

We made a number of changes dealing with rule applicability. First, we expanded the list of specific operations that are part of the source category, but are not subject to any control, reporting, or recordkeeping requirements. These operations include application of mold sealing and release agents, mold stripping and cleaning, repair of previously manufactured parts that is unrelated to collocated manufacturing operations, personal activities that are not part of the manufacturing operations (such as hobby shops on military bases), prepreg materials as defined in § 63.5935 of the final rule, non-gel coat surface coatings, repair or production materials that do not contain resin or gel coat, and research and development (R&D) operations as defined in section 112(c)(7) of the CAA. In addition, we exempted any facility that uses less than 1.2 tpy of resin and gel coat, and R&D facilities and operations at manufacturing facilities. The rationale for these changes is discussed in the responses to major comments section.

I. Potential Overlap With the Boat Manufacturing NESHAP (40 CFR Part 63, Subpart VVVV)

In the proposed rule, we were silent concerning situations where a facility could be subject to both the Boat Manufacturing NESHAP, 40 CFR part 63, subpart VVVV, and the Reinforced Plastic Composites NESHAP. In today's final rule, we have added § 63.5787 to clarify which subpart applies. In general, if your facility makes boat hulls and decks, or molds for boat hulls and decks, then 40 CFR part 63, subpart VVVV, applies to you. If 40 CFR part 63, subpart VVVV, does not apply to you, and you meet the applicability criteria in § 63.5785 of the final rule, then the Reinforced Plastics Composites NESHAP apply. If you are subject to 40 CFR part 63, subpart VVVV, and also make reinforced plastic composite parts that are not used in boat manufacture, then both 40 CFR part 63, subpart VVVV, and the Reinforced Plastic Composites NESHAP may apply. See § 63.5787 in the final NESHAP for more detail.

J. Determination of Resin and Gel Coat HAP Content

In the proposed rule, we stated that facilities could determine resin and gel coat HAP content using material safety data sheets (MSDS) or resin specification sheets. In the final rule, we have included § 63.5797, which describes in more detail how to determine resin and gel coat HAP content. This new section also clarifies that only organic HAP are included in determining HAP content. The reason is that we have no data to indicate that any other HAP, such as inorganic HAP potentially present in pigments or resin solids, are emitted from the production process. We also now include a provision to account for normal manufacturing tolerances that occur in resin and gel coat manufacture.

K. New Source MACT Floors

In the proposed rule, the MACT floor for all open molding and pultrusion operations located at new sources above a 100 tpy HAP emission threshold was a 95 percent weight reduction in HAP emissions. In the final rule, we have subcategorized open molding and pultrusion operations by part size. For open molding and pultrusion operations that produce large parts the floor level of control is now the same as for existing sources. Large parts are defined in § 63.5805 (d)(2). All other new source MACT floors are unchanged.

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 our responses to those comments can be found in Docket ID No. OAR–2003–0003 (formerly Docket No. A–94–52).

Comment: We received numerous comments on the above-the-floor requirements for existing sources. First, commenters stated that EPA had significantly underestimated the costs of add-on controls. They stated that industry estimates were, in some cases, ten times higher than our estimates. They stated that we had overestimated the HAP concentrations in the exhaust streams, underestimated the exhaust flows, and omitted costs for continuous monitors.

Second, the commenters claimed that we had not established that 95 percent capture and control was technically feasible for this diverse industry, and that only two facilities out of 433 actually had achieved the 100 percent capture that is required to meet an overall capture and control level of 95 percent. They also stated that these two facilities were atypical of the industry as a whole because they also had collocated coating operations that were also routed to the same control device. They further stated that the criteria of EPA Method 204 of appendix M of 40 CFR part 51 are not feasible for most facilities in this industry. For these reasons, the commenters recommended that the above-the-floor requirement be removed.

Response: As a result of these comments, we reviewed the costing methodology for the above-the-floor requirements in the proposed rule and made changes to our costing methodology for add-on controls. Some of the major changes were lowering the default inlet concentration to the control device from 100 parts per million volume (ppmv) to 50 ppmv, revising the fan power equation, and using 2,000 operating hours per year, rather than 6,000 hours per year, as a default value in the absence of actual yearly operating information.

Based on these new costs, the cost per ton of HAP emissions reduction of the above-the-floor requirement significantly increased for most process/product groupings. As a result, we have removed the above-the-floor control requirements for all process/product groupings except centrifugal casting and continuous lamination/casting. It should be noted that the comments discussed above were based on open molding operations. We received no comments specifically on the above-the-floor requirements as applied to centrifugal casting and continuous lamination/casting.

Comment: One commenter opposed allowing control requirements for new sources emitting less than 100 tpy to be the same as those for existing sources because a new site has the opportunity to design and incorporate pollution prevention and control strategies that would be cost-prohibitive for existing sources to implement. The commenter recommended that EPA consider more stringent requirements for new sources, including smaller sources, through generally available control technology or other approaches that would not be overly burdensome.

Another commenter adds that EPA's analysis indicates that the best controlled facilities have reduced HAP by only 95 percent, and 95 percent is most likely the maximum extent of historic regulatory requirements. The commenter notes that EPA looked at the experience of existing facilities to achieve greater than 95 percent control through add-on control in conjunction with pollution prevention and did not find facilities achieving greater control than that. While the assessment may be correct for what EPA looked at, the commenter states that examining past experience that lacks regulatory drivers for greater control is not the same as examining the present and future potential for control opportunities. The commenter believes that the proposal dismisses the potential for these two control techniques (add-on control and pollution prevention) to be applied to new sources.

Response: We agree that new facilities can more easily incorporate pollution prevention and add-on controls. This is the reason we set the new source floor at 95 percent control for most new sources that emit over 100 tpy, and not at the same level as existing source floors.

Facilities that have incorporated add-on controls tend to be larger facilities. New facilities in this industry can be small operations that operate a limited number of hours and still be major sources. These small sources cannot reliably meet 95 percent capture and control given their limited operating schedules and their potential lack of on-site technical expertise. Therefore, we are not requiring a source emitting less than 100 tpy to meet the 95 percent capture and control level.

We examined whether or not we could specify some other level of control for small sources, but we could not determine what would be an appropriate level of capture and control below 95 percent. We also considered basing new source MACT floors for facilities that emit less then 100 tpy on the single best facility that incorporated pollution prevention. However, as discussed in the preamble of the proposed rule, we believed that using one facility that had the lowest HAP content resins and gel coats was unworkable, unless we could show that all new plants would build the same products as the plants that had the lowest HAP content resins and gel coats.

Given this, we had to determine a threshold value above which 95 percent capture and control is feasible for all new plants, given the diversity of this industry. We selected 100 tpy of actual HAP emissions because above this level facilities tend to operate more hours per year and are better equipped to maintain capture and control systems. Also, at the time we proposed the rule, the smallest facility in the open molding process/product grouping that was permitted at 95 percent capture and control emitted approximately 100 tpy. Therefore, we chose this number as the threshold at which 95 percent capture and control is required.

This was not the only approach we could have taken to subcategorize new sources, nor is 100 tpy the only threshold we could have chosen. For example, we could have subcategorized by annual hours of operation. However, depending on the threshold we set, this could result in large, new HAP emissions sources avoiding the 95 percent capture and control requirements simply by building a larger facility and reducing hours of operation. By tying the requirement directly to HAP emissions, we believe we have taken the most logical approach from an environmental standpoint and an enforcement standpoint. Also, the 100 tpy threshold is a reasonable choice that means that all new large facilities in most of the process/product groupings will have to meet the most stringent HAP emissions control levels.

Comment: We received numerous comments on the new source MACT floor for facilities with open molding, pultrusion, SMC manufacturing, mixing, and BMC manufacturing that emit 100 tpy or more of HAP from these operations. The commenters stated that the 95 percent capture and control requirements of the floor were technically infeasible and too costly. They also stated that 95 percent capture and control does not represent the best HAP emissions control approach when all environmental impacts, such as increases in emissions of criteria pollutant and greenhouse gases, are considered. The commenters note that the CAA states that the best controlled similar source must be the basis of the new source MACT floor; therefore, EPA is only authorized to apply the 95 percent capture and control requirements to facilities that are similar. The sources cited by EPA make uniformly-sized parts in high volume, employ mechanical resin application, and operate three shifts a day. However, they differ from other facilities in the industry. One of the sources is primarily a metal fabrication operation and sends significant amounts of emissions from a painting operation to the control device, making an unusually rich combustion stream. They also claimed that the facility had not been proven to meet the requirements of EPA Method 204 of appendix M of 40 CFR part 51. The other facility employs an unusual molding operation, and the ability of this facility to actually meet the 95 percent capture and control requirement is open to question. Neither of these sources are similar to any other composites open molding operation.

Response: Our available information continues to support that the appropriate new source floor for facilities that emit 100 tpy or more of combined HAP from their open molding, pultrusion, SMC manufacturing, BMC manufacturing, mixing, centrifugal casting, continuous lamination, and continuous casting operations is 95 percent capture and control for several reasons. First, the term ''best control'' means best control of HAP emissions. The only other control techniques mentioned by the commenters were the pollution-prevention techniques that make up the existing source floors. The commenters claim that when other environmental impacts of add-on controls are considered, pollution-prevention control techniques are actually superior. They provided examples that showed HAP emissions reductions from pollution-prevention techniques for some facilities of up to approximately 70 percent; however, the actual HAP emissions reductions a facility will achieve based on pollution-prevention techniques will be highly site specific. Also, the highest pollution-prevention HAP emissions reduction examples assume facilities could reduce HAP emissions by enhanced process monitoring, which would reduce materials used. The HAP emissions reductions based on materials-use reductions assumes facilities are not currently using materials as efficiently as they could. There are no data to support this assumption, and the potential for HAP emissions reduction of this type could vary widely. The second example presented by one commenter assumes facilities would use nonatomized gel coat application. However, the same commenter has stated emphatically that nonatomized gel coat application cannot be used at every facility. Therefore, this example cannot be considered to fairly represent the HAP emissions reductions achievable for the industry as a whole.

Our overall estimate of the HAP emissions reduction that would occur with only pollution-prevention techniques is approximately 41 percent for open molding, compared to the significantly higher 95 percent HAP emissions reductions possible with capture and control. The CAA indicates that ''best control'' in the context of setting floors is the control that achieves the best HAP emissions reduction. Based on this, 95 percent capture and control represents best control for this industry.

Even if we were to consider other environmental impacts of capture and control, 95 percent control would still be considered best control. Calculations provided by one commenter indicates that a total of only 0.15 tons of criteria pollutants are generated per ton of styrene reduction; however, this number appears to be based on one of the three actual operating facilities using add-on controls shown in the commenter's example. Data from another facility using a concentrator/oxidizer system in the same report showed criteria pollutant emissions of 0.06 tons per ton of styrene emissions reduction. Our estimate at proposal was that, on average, this figure is closer to 0.04 tons of criteria pollutants per ton of HAP emissions reduction. Regardless of which number is used, the amount of HAP emissions reduction is significantly higher than any resulting criteria pollutant emissions. The commenters also cite greenhouse gas effects. They state that 30 tons of greenhouse gases are produced for every ton of styrene emissions reduction.

We reviewed the information that formed the basis of the estimate of greenhouse gas estimates. Based on our analysis, we believe that the estimate of 30 tons of greenhouse gases are produced for every ton of styrene emissions reduction is an overestimate because it is based on examples where the HAP emissions reduction varies between 77 to 84 percent. The final rule will require 95 percent HAP emissions reduction. Also, we believe the air flows used in the examples provided by the commenter are higher than will be required for new facilities. Higher air flows result in increased use of natural gas and higher greenhouse gas emissions. We believe a more accurate number would be approximately 20 tons of greenhouse gases produced for every ton of styrene emissions reduction.

Second, regardless of which number is the most accurate, any contribution of the final rule to global greenhouse gas emissions is insignificant. The total greenhouse gas emissions in the United States exceed 6 trillion tons from fossil fuel combustion alone. However, the difference between emissions of styrene from a facility controlled to the 95 percent level and one controlled using only pollution prevention is significant to the populations living near an affected facility.

The commenters also stated that the facilities that formed the basis of the new source floor are not ''similar sources.'' We disagree because there are actually three sources within this source category that meet the criteria to set a 95 percent capture and control floor. The commenters point out that three is a small number compared to the 433 facilities in the database at proposal. However, the CAA requires the new source floor to be based on the single best performing similar source. Therefore, only one source is sufficient to set a new source floor as long as we determine it is similar. The commenters stated that the source setting the floors operates three shifts (they shut down on weekends). However, we subcategorized new sources by annual HAP emissions. The reason was that larger sources are more likely to operate more than one shift. Also, since this floor only applies to new sources, the facility can be designed to meet the necessary production rate with three shift operation if the operator desires to minimize control device startups and shutdowns.

The commenters stated that in two cases, the floor facilities have collocated surface coating operations. Our evaluation of these facilities was based only on the reinforced plastic composites portion of the facility. During site visits to these facilities, we determined that these facilities were required to apply 95 percent capture and control to all major processes due to State regulations. That requirement would apply regardless of whether or not the facility had collocated surface coating operations. Also, the presence of the surface coating operations does not result in a more concentrated exhaust stream compared to facilities without surface coating operations. Thus, there is no technical basis to say these facilities are not similar based on the presence of surface coating operations.

We also reviewed the commenters claim that the facilities that set the new source floor do not actually meet the requirements of EPA Method 204 of appendix M of 40 CFR part 51. Part of that claim was based on the fact that the floor facilities had doors in the PTE that were opened to move parts and materials in and out of the PTE.

One criteria of EPA Method 204 of appendix M of 40 CFR part 51 is as follows: ''All access doors and windows that are not treated as natural draft openings shall be closed during routine operation of the process''. This criteria is not intended to require that these doors be closed at all times. It means that doors must be closed any time that you are not actually moving parts or equipment through them. Therefore, the fact that the floor facilities open doors to move parts in and out of the PTE does not mean they do not meet the requirements of EPA Method 204.

In addition, we reviewed the compliance determinations for two of the floor facilities. Our review did not reveal any conditions that would indicate that the requirements of EPA Method 204 of appendix M of 40 CFR part 51 are not being met.

Comment: The commenters stated that the facilities that manufacture large parts using open molding or pultrusion are not similar to the floor facilities that are the basis of the capture and control requirements for the new source floors. They stated that the facilities used to set the 95 percent capture and control requirement only manufacture small parts and, therefore, should not be used to set a capture and control floor requirement for facilities making large parts. They also stated that achieving 100 percent capture is not feasible for large parts sources in these process groups. Though EPA had cited facilities that coated large parts in permanent total enclosures (PTE), coating operations cannot be considered similar to the manufacture of reinforced plastic composites. They suggested that any part with any dimension that exceeds 12 feet be considered a large part and be exempt from capture and control requirements.

Response: After reviewing the comments and available data, we have determined that the facilities currently achieving 95 percent capture and control are not similar to sources producing large parts. At proposal, we noted that we had not identified any facilities in the reinforced plastic composites industry where processes producing large parts, such as storage tanks and swimming pools, have applied 100 percent efficient capture systems, but stated our belief that such PTE were technically feasible based on large PTE in other industries. We reviewed available data on the facilities in our database and found that facilities producing parts over a certain size presented different technical issues from facilities that have successfully incorporated 95 percent capture and control. As noted in the preamble to the proposed rule, one of these facilities has a PTE large enough to produce large parts. However, the air flows and HAP concentrations exiting the PTE at this facility are not the same as would be expected from a facility using a similar sized PTE to capture and control emissions from large parts production.

We also noted in the preamble to the proposed rule that surface coating operations for very large parts (as large as ocean going ships) had successfully applied PTE. However, we agree that coating operations and reinforced plastic composites operations are not similar sources. Reinforced plastic composites production typically requires more workers per part due to the necessity to both apply and roll-out the resin. Also, large parts are continuously laminated until completion rather than coated in sections.

This difference in sources, while applicable to evaluating floors based on capture and control, does not exist in the case of floors based on pollution-prevention technologies such as the use of low-HAP materials and nonatomized resin application. For that reason, we did not differentiate between large and small parts when setting floors based on pollution-prevention control techniques for either new or existing sources.

Because we determined that capture and control was not the appropriate floor for large parts manufacture, the floors for these specific operations are now the same as the floors for existing operation, which are emission limits based on the use of low-HAP materials and nonatomized resin application.

However, we do not agree with the commenter's suggested definition of large parts, because it would exempt parts from capture and control requirements where those requirements have already been demonstrated. The largest part produced at a facility where 95 percent capture and control is demonstrated has a volume of 250 cubic feet. If this part were placed in a rectangular six-sided box, the largest side of the box would be 50 square feet. Therefore we chose these criteria as the definition of a large part for open molding. For pultrusion, the largest part produced by a facility with 95 percent capture and control was 2 inches high, 10 inches wide, and had approximately 350 reinforcements. Therefore, we choose these criteria as the definition for large pultruded parts.

Comment: Several commenters stated that capture and control requirements would make it difficult for facilities to meet Occupational Safety and Health Administration (OSHA) worker health and safety requirements. Process enclosures at current facilities are designed and operated to provide safe and efficient production of composite products. The primary purpose of enclosures in this industry is to remove contaminated air from the workplace to achieve OSHA requirements for limiting occupational exposures. Enclosures must also allow enough cool air to enter the workplace so that workers are not subject to excessive heat stress. One commenter provided a study that stated that if process enclosure exhaust flows were reduced to increase exhaust concentrations being routed to the control device, worker exposure to contaminants and heat would be increased to unacceptable levels.

Response: The use of PTE for capture of HAP emissions should not result in increased worker exposure to contaminants or heat stress if appropriate precautions are taken. As previously noted, one solution is to design the spray enclosures based on meeting worker exposure requirements, and then enclosing the entire lamination area in a PTE. The facilities currently using PTE do not exceed OSHA exposure guidelines. Experience in the printing and publishing industry shows that use of PTE, in many cases, results in reduced worker exposure to both contaminants and heat stress. In high heat and humidity areas, it is likely that some type of air cooling will be required during summer. However, this issue is present even without the requirement for capture and control.

Comment: Five commenters stated that the limit of tooling gel coats (38 percent HAP) is not achievable. One commenter claimed that we set this limit based on one infrequently used product that is not representative of the industry as a whole. The commenter's products represent 70 percent of the tooling gel coat market and the maximum HAP contents range from 42 to 50 percent HAP. Their lower HAP gel coat has not gained a significant market acceptance. They have performed 2 years of research and development efforts aimed at developing a lower-HAP gel coat that would meet the requirements of the proposed rule and have been unsuccessful. They stated we had not independently tested the product on which the standard is based, so there has been no demonstration of the product's quality or suitability for broad use in the industry. The commenter also stated that setting the standard at 38 percent would have the effect of encouraging manufacturers of tooling gel coats to use para methyl styrene, which is not regulated as a HAP, as a substitute. Also, lower-HAP gel coats may be less durable than products currently on the market, which would result in reduced mold life. Therefore, more molds would have to be built to produce the same amount of product. This would result in the standard actually causing a HAP emissions increase. This commenter requested a tooling gel coat HAP limit of 52 percent HAP for clear gel coats and 49 percent for pigmented gel coats.

A second commenter asked that EPA consider tooling gel coats as speciality gel coats exempt from HAP limits similar to the speciality coating exemption contained in the Aerospace Coating MACT standards (40 CFR part 63, subpart GG). This commenter stated there is a strong possibility they will discontinue manufacturing tooling gel coats if the standard is not changed.

Another commenter stated that we must allow higher HAP limits for tooling applications in vacuum resin infusion, compression, and resin transfer molding composite tool applications, where high exotherms and heated tools are required. Durability of the mold surface is essential to the longevity of the mold. Thermal stability is a key element that requires higher-HAP content. Repeated high exotherms during the cure cycles can greatly reduce the life of low-HAP gel coats. Greater porosity found in the low-HAP materials can also create mold surface problems. Ironically, these are closed molding processes, which result in much lower HAP emissions and employee exposures than open molding processes. Closed molding facilities will not be able to offset the small amounts of high-HAP tooling gel coat used in tool production with large amounts of low-HAP general purpose open molding resins using facility averaging. The commenter recommends that the final MACT standards allow up to 48 percent HAP content for pigmented tooling gel coats.

Response: We have received additional data since proposal. Based on these data, we increased the floor for tooling gel coats to 40 percent. We obtained very little data from industry on tooling gel coats in the original data requests and in additional efforts to obtain additional tooling gel coat data. To supplement the limited data, we looked at the tooling gel coat data used in developing the Boat Manufacturing MACT (40 CFR part 63, subpart VVVV). This is a reasonable approach because gel coat manufacturers stated that they sold the same tooling gel coats in both the reinforced plastic composites and boat manufacturing industries. The revised HAP content limit of 40 percent is the same as the Boat Manufacturing NESHAP HAP content limit for tooling gel coats.

We considered the issue raised by the commenters that a low limit in tooling gel coats would actually increase HAP emissions. While we agree that more frequent replacement of inferior molds would lead to increased HAP emissions, the factual data do not indicate that a 40 percent HAP content limit results in inferior molds. Facilities in the field (both reinforced plastic composite manufacturers and boat manufacturers) are building molds with 40 percent HAP tooling gel coat. We have no data to indicate that these facilities are producing lower quality molds than average, and none of the commenters has been able to provide objective data to substantiate that reduced mold life is inevitable with low-HAP gel coats. The information provided was based on assumed reduction in mold life. Also, the fact that one of the commenters covers 70 percent of the market is irrelevant, because MACT floors are set based on best control, not market share. In the absence of objective data that the facilities that use low-HAP tooling gel coats produce inferior molds with shorter mold lives compared to the rest of the industry, the MACT floor must be set based on the best performing facilities. In this case, that results in a floor of 40 percent HAP.

Comment: One commenter stated that although clear cultured marble gel coats have been formulated with HAP levels as low as 40 percent, the tolerance for thermal shock and water resistance are lowered with lower-HAP levels. According to the commenter, 48 percent HAP clear coat is required for manufacturers to maintain current warranties and many have switched back to the high-HAP clear gel coats due to the poor performance of the lower-HAP clear gel coats. The commenter suggests that ''clear gel coats for cultured marble'' should be defined as ''those used for products subject to ANSI Z124 testing'' and the rule should limit the HAP content of these materials to 48 percent. A second commenter also stated that a 48 percent HAP content is necessary to meet desired gel coat performance. The commenter claims that the proposed limit of 44 percent does not take into account the entire spectrum of uses and does not satisfy the requirements of their applications.

Response: We are bound by the statutory requirements of the CAA to set MACT floors based on the average of the best performing sources as illustrated in the available data. In the absence of specific data to support the request, we have no basis to change the floor.

In developing different process product grouping for gel coats, we did consider the different performance characteristics of different types of gel coat. These types were tooling gel coat, clear gel coat, pigmented gel coat (white/off white), pigmented gel coat (all colors except white/off white), fire retardant gel coat, and corrosion resistant/high strength gel coat. Based on information provided by industry, we determined that these different gel coat types had sufficiently different characteristics that they should be considered separately for floor determinations. However, we do not have data to demonstrate that it would be appropriate to further subcategorize clear gel coats based on each gel coat's performance characteristics.

Comment: One commenter states that only the white/off-white and some pastels can meet a floor of 30 percent HAP because of the titanium dioxide and inert filler loading. Most solid colors require a HAP content of 38 to 40 percent. Higher performance pigmented gel coats that require high molecular weights would, therefore, need a higher monomer content to achieve workable viscosities and would probably no longer be available to the market place.

Response: White/off-white gel coats will be defined as those containing 10 percent or more by weight titanium dioxide. As proposed, these gel coats will be subject to a HAP limit of 30 percent by weight, and all other pigmented gel coats will be subject to a HAP limit of 37 percent by weight.

At the time we developed the proposed rule, we had no data on pigmented gel coats other than white/off-white and some reds. Based on industry comments, we split pigmented gel coat into two groupings, white/off-white and other colors due to the fact that white/off-white gel coats contain titanium dioxide, which is a heavy pigment, while other colors do not. At the time we created this new grouping, we requested data from the industry concerning the HAP contents of pigmented gel coats. The industry representatives indicated that these gel coats typically have 37 percent HAP. Because non-white pigmented gel coats comprise a very small part of the total industry, we elected to accept the 37 percent number rather than attempt to gather additional data. The commenter provided no data to support their request. In the absence of new data, we have no basis to change this floor.

Comment: Two commenters request that the category of fire retardant gel coats be exempt from HAP limits. Both commenters note that fire retardant gel coats are used in manufacturing transportation parts, building products, trains, airplane parts, and theaters. One commenter stated that these are all critical areas of applications and require various Underwriter Laboratory (UL), American Society for Testing and Materials (ASTM), and Fire Rating Certifications. It was suggested that fire retardant gel coats be defined as ''those used for products for which low-flame/low-smoke resin is used.''

Response: We have added a process/product grouping for fire retardant gel coats. These gel coats are defined as gel coats used in low-flame spread/low-smoke product applications. We have established a HAP emissions limit of 854 lb/ton which is equivalent to gel coats with a maximum HAP content of 60 percent using atomized application.

Comment: Four commenters stated that we need to establish a separate process/product grouping for corrosion-resistant gel coats. The commenters stated that gel coats used in specific corrosion protection applications must meet the same requirements as corrosion-resistant resin. One commenter added that gel coats requiring chemical resistance to a wide range of chemicals including acids, bases, and solvents are often based on the resins similar to those that make up the structural part of the composite and provide the necessary corrosion resistance. For this reason, the commenters believe that the HAP limitation for corrosion-resistant gel coats should be 48 percent, the same as it was in the proposed rule for lamination resins used to make corrosion-resistant composites. It was suggested that ''corrosion-resistant gel coats'' be defined as ''those used for products made with corrosion-resistant resin'' and that the rule limit the HAP content of these materials to 48 percent.

Response: We agree that there are technical limitations for corrosion-resistant applications that warrant a separate limit for corrosion-resistant gel coats, similar to the separate limits established for other specialty resins and coatings.

In the final rule, we established a separate HAP content limit of 48 percent for corrosion-resistant gel coats and defined them as ''those gel coats used to manufacture products made from corrosion-resistant resin.'' We believe 48 percent HAP is the appropriate number because the highest HAP content level allowed in all the corrosion-resistant resin process/product groupings is 48 percent.

Comment: Several commenters stated that we need an additional process/product grouping for low-shrink resins. These resins have special shrinkage control properties that are unique and cannot be obtained in any other way. These resins were not identified when EPA surveyed the industry. One commenter stated that a specialty process group is needed for high molecular weight, low-shrink resins used in wind turbine blade manufacturing. The resin currently in use is 42 percent HAP unfilled. The facility would be unable to gain any relief by facility averaging because the facility predominantly uses zero-HAP epoxy resin, rather than a low-HAP production resin. Commenters requested that EPA create a subcategory for these resins with a maximum HAP level of 48 to 52 percent.

Response: Our understanding is that these low-shrink resins are highly filled resins with special chemistry that allows them to cure at room temperature with significantly less shrinkage than a typical resin. Given the unique properties of this resin, we agree that a separate process/product grouping is appropriate. The resin manufacturer indicated that the maximum HAP content of the resin is 50 percent. Therefore, we have set HAP emissions limits for shrinkage-controlled resins that allow up to 50 percent HAP. This specialty resin costs significantly more than other resins, which provides a deterrent for facilities using the resin where its special properties are not necessary.

Comment: One commenter believes higher HAP limits are needed for the filament application of corrosion-resistant products. The commenter claims that the rule, as proposed, will eliminate use of certain types of corrosion-resistant resins that impart required properties to certain applications. The commenter noted that the proposed limit for corrosion-resistant filament application resins was lower than for noncorrosion-resistant filament application resins. The commenter believes that the HAP emissions limit for all categories of filament application should be 178 lb/ton, and stated that this change will have insignificant impact on EPA's total HAP emissions reductions target, with the difference in HAP emissions reductions being 3 tpy.

Another commenter states that the proposed MACT of 42 percent HAP cannot be met with an isophthalic resin without some compromise to the physical properties of the cured resin. The commenter requested EPA to consider the 48 percent HAP limit found in South Coast Air Quality Management District (SCAQMD) Rule 1162.

Response: While we acknowledge the commenters concerns, we developed the floor for this process/product grouping in the same manner as floors for other process/product groupings in open molding. We gathered data from industry and ranked the performance of the facilities in the corrosion-resistant process group and set the MACT floor based on the average of the best 12 percent, as required by law.

Though we are not changing the floor for filament application, we are retaining a provision included in the proposed rule that allows facilities to use the same resin in multiple processes. The rationale for this provision is, while our floor development ranking procedure is correct, we also realize it does not account for the fact that some facilities use multiple operations to produce components of the final product, and the resins used in the subcomponents must be compatible. This provision will allow most facilities the flexibility to use the necessary level of HAP in corrosion-resistant applications because mechanical operations have a higher-HAP content limit.

Comment: One commenter recommended that the model point value for corrosion-resistant manual resin application be changed from 124 to 190 to reflect the use of the same percent HAP used in mechanical resin application. The commenter notes that the facility that sets the floor using a 40 percent HAP resin is not typical of a true corrosion-resistant (CR) company because that facility uses only manual application, while true CR companies use both manual and mechanical application techniques. A second commenter requested that the MACT floor for manual corrosion-resistant resin be changed so that it is the same as the floor for mechanical corrosion-resistant resin.

Response: As discussed in the previous response, the floor is based on the data available for this process/product grouping. However, as with filament application, the provision allowing facilities to use the same resin in multiple operations should allow enough flexibility for facilities to meet rule requirements, but still produce products with the necessary properties. Therefore, facilities that produce corrosion-resistant and noncorrosion-resistant products using both manual and mechanical resin application will be able to use the same resin in both operations.

Comment: One commenter stated that the proposed MACT of 35.5 percent HAP for noncorrosion-resistant centrifugal casting would result in a resin too high in viscosity, which may create air release problems. The commenter states that lower molecular weight resins would cause some limitations in physical property requirements.

Response: We received new data that changed the floor for centrifugal casting to 37.5 percent HAP. With less than 30 facilities in the process group for which we have data, the MACT floor must represent the average performance of the top five facilities. We have no data to support raising the floor any further.

Comment: One commenter stated that they believe that new operations should be subject to new source MACT even if they are added to an existing source. The commenter understands that there are cases in which the new equipment may be incorporated within an existing manufacturing line, making it difficult to employ separate controls (*e.g.*, if all the equipment is controlled at a later end point). The commenter suggests, however, that separate and more specific provisions can be included in the rule to govern such cases.

Response: This comment is only applicable to new source MACT for specified processes that emit over 100 tpy, because below that level, new source and existing source MACT are the same. We believe that, for this particular industry, the ability of a facility to incorporate the capture and control requirements of new source MACT for larger facilities is closely related to the structure housing the process, because the size and shape of the existing building affects the layout of the production line. Even if there are significant process changes, this by itself would not indicate that the building housing the process has been changed, thereby making retrofit of capture and control systems unfairly difficult compared to a new greenfield facility. We believe that attempting to develop a detailed set of requirements that could cover every situation would be unrealistic.

We agree that this provision may result in small facilities being able to grow significantly without becoming new sources. However, it should be noted that in the final rule, we have overridden the portion of the general provisions in 40 CFR part 63 which states that facilities that move are still considered existing. Because we believe the cost and technical feasibility of capture and control are closely related to the building housing the process, we believe that a facility that moves should be considered a new source because they can plan for capture and control prior to erecting or selecting a new building. Therefore, facilities that would be considered existing sources under the general provisions will be considered to be new sources under the final rule. Therefore, in this aspect, the final NESHAP are more stringent.

Comment: Several commenters requested clarification in this rule on which operations at a reinforced plastics composites facility and which operations at a boat building facility will be covered by this rule and which will be covered by 40 CFR part 63, subpart VVVV (Boat Manufacturing NESHAP).

It was noted that neither the preamble nor the proposed rule explicitly states whether this rule applies to manufacturing of boats or boat components and requested that language be added to the final rule clarifying that this rule does not apply to any processes or operations subject to 40 CFR part 63, subpart VVVV. One commenter stated that boat building plants routinely produce non-boat parts and presumed that such facilities will be required to meet the composites rule when producing composite parts that are not associated with the manufacture of boats. The commenter also points out that some composite plants produce boat parts that are then used to build boats, such as when producing barge covers that are related to the manufacture of river barges.

Response: We have added § 63.5787 to the final rule to specifically address this issue. A facility must produce boat hulls and decks, or molds for boat hulls and decks, to be covered by the Boat Manufacturing NESHAP (40 CFR part 63, subpart VVVV). If it produces reinforced plastic composites, as defined in the final rule, and is not covered by the Boat Manufacturing NESHAP, then it is covered by the Reinforced Plastic Composites NESHAP, regardless of the final use of the parts.

In the case where a facility is subject to the Boat Manufacturing NESHAP (40 CFR part 63, subpart VVVV), but the facility also makes parts that are not a component of their boats, then the non-boat parts are covered by the Reinforced Plastic Composites NESHAP. However, only resins and gel coats actually used to make parts covered by the Reinforced Plastic Composites NESHAP are considered in determining compliance.

In addition, in order to simplify compliance, we are allowing facilities that are subject to the Boat Manufacturing NESHAP (40 CFR part 63, subpart VVVV) and that also make parts subject to the Reinforced Plastic Composites NESHAP, to elect to make all their manufacturing operations subject to the Boat Manufacturing NESHAP if they can demonstrate, through the appropriate HAP emissions calculations, that this will not result in any HAP emissions increases over what would occur if they complied with the Reinforced Plastic Composites NESHAP for non-boat part production. We also clarify that HAP emissions from activities covered by the Boat Manufacturing NESHAP are not considered when calculating HAP emissions thresholds to determine the applicability of add-on controls.

Comment: One commenter requested that the rule explain what happens in instances where the 100 tpy threshold is exceeded even by a little, temporarily. Does this require that add-on controls be installed?

Response: It is our intent that unusual circumstances result in a facility having to add and operate add-on controls. We have included clarifying language in the final rule that allows a one-time exemption to the 95 percent capture and control requirements for facilities that were below the 100 tpy threshold and exceed the threshold due to unusual circumstances. This exemption allows facilities to average annual HAP emissions over 3 years to determine if they exceed the threshold. However, facilities are also required to document the unusual circumstances that caused the exceedance, and why they expect to remain below the threshold in the future. If they exceed the threshold a second time, then the exemption is immediately withdrawn and they must comply with the 95 percent capture and control requirements within 3 years from when they originally exceeded the threshold.

Comment: Two commenters requested clarification of several issues related to repair work. They are assuming the proposed rule is intended to cover manufacturing operations only. Repair processes conducted in a manufacturing facility are also covered because they are likely to use the same materials. If the processes conducted are re-manufacturing, refurbishment, repair, or maintenance, it will be considered repair for the final NESHAP. The exception would be if the repair is a part which frequently needs replacement and is made in an assembly-line type process. They also asked that since there is no de-minimums level, if any manufacturing is done, would it be covered? They noted that at some of the commenter's facilities, some minor manufacturing may occur. The repair work that may also be done at the same facility is not related to the manufacturing processes (and would be using different resin and reinforcing materials.) The commenter believes that as the rule is currently written, both the manufacturing and repair operations would be covered. The commenter does not believe that is EPA's intent and asked if we could develop language to correct that.

One commenter stated that definitions of repair and manufacturing should be added to clarify the types of repair and manufacturing covered by the rule. The preamble and rule should be consistent in stating that the facilities that only repair composites are not affected. The commenter also feels that repair operations collocated with unrelated manufacturing operations should not be covered either. In a related comment, several commenters asked that a low-use cutoff be established so that facilities that use small amounts of resin and gel coat are not subject to the rule, especially since those uses may be incidental to a completely different manufacturing operation.

Response: The final rule has been written to make explicit what repair operations are and are not covered. Specifically, facilities at which only repair occurs are not covered by the final rule. In addition, repair of previously manufactured reinforced plastic composites unrelated to the reinforced plastic composites manufactured at the facility are also not covered by the final rule. Repair processes on parts that are manufactured at the same location are covered by the final rule. In addition, we have added a low-use cutoff exemption to the final rule. We reviewed our entire database and determined that we had no data for facilities that use less than 1.2 tpy of resin and gel coat combined. Therefore, we believe that, in the absence of any available data, facilities that use less than 1.2 tpy of resin and gel coat to produce reinforced plastic composite products or components should be exempt from the final rule.

Comment: Many commenters requested that the rule incorporate an exemption for R&D facilities, and for R&D operations collocated with manufacturing operations. The materials used in R&D operation may be significantly different from those used in manufacturing.

Response: We have written the final rule to exempt R&D facilities and R&D operations. The definition of R&D is the same as contained in section 112(c)(7) of the CAA.

Comment: Several commenters stated that they believe the EPA cannot set different standards for small and large businesses based on the size of the business, rather than the size of the source. They believe that because the CAA clearly identifies ''major source'' by the level of HAP emissions, MACT floors must depend on the average HAP emissions reductions by the best sources without regard to cost factors of business size. They stated that this distinction was unfair because two facilities that emit the same amount of HAP would potentially have different requirements solely on the basis of their ownership. The commenter also believes that EPA did not adequately support the determination that large businesses have better access to capital than small businesses. They stated that this is not necessarily true.

Response: Based on the revised cost analysis, we have determined that it is no longer necessary to distinguish between small and large businesses. However, we still believe the use of different thresholds in the proposed rule was appropriate because this distinction only applied to the above-the-floor regulatory option. The CAA specifically states that when we go above the floor, we must consider costs.

Comment: One commenter states that the small business threshold of 250 tpy should apply to both existing and new sources. New capital funding to build a new facility would require due diligence on the part of the lending institution. The new facility would have to generate enough cash flow to meet the added debt load. Adding a capture and control system to the debt load would significantly reduce the cash flow available to pay back the lender's note on a new facility because the capture and control system is a non-value added asset. The lending institution would discern this and deny the loan.

Response: For new sources, the proposed (and final standard) is the MACT floor, not an above-the-floor option. We do not have the flexibility to create small and large business distinctions when the standard is set at the MACT floor. Therefore, the final rule for new sources does not incorporate a small and large business distinction.

Comment: Several commenters stated that a method to establish percent reduction and HAP emissions factors is needed to foster the development of new products and equipment to serve the affected industry. They recommended that EPA establish a protocol to allow the smooth introduction of equipment, products, and other technologies into the final rule.

Response: Allowing facilities to use site-specific HAP emissions factors, and the procedure in the general provisions in 40 CFR part 63, subpart A, that allows facilities to demonstrate equivalent HAP emissions reductions, adequately address the incorporation of new HAP emissions reduction technologies. However, we have added § 63.5798 to the final rule that discusses how to obtain approval for new technologies.

Comment: Two commenters requested that EPA change the averaging provisions to allow a facility that changes some processes to non-styrene containing resins to average these resins with the styrene-containing resins to demonstrate compliance.

Response: We do not believe it would be appropriate to allow the use of non-styrene containing resins and gel coats to be included in the calculation of compliance. The MACT floors were developed only considering resins and gel coats that contain styrene (and other organic HAP, such as MMA) used at the facilities in our database. We did not consider non-styrene resins and gel coats used at our database facilities. Given the basis for developing the standards, it is inconsistent to allow non-styrene containing resins and gel coats to be used in the compliance calculations. Therefore, we have not added this request to the final rule.

Comment: Numerous commenters recommended replacing the point value system with the Composite Manufacturers Association (CFA) UEF table. The composites industry is already using these HAP emissions factors to calculate annual HAP emissions. It would simplify reporting and recordkeeping if one set of HAP emissions factor equations were used. Another commenter stated that if EPA uses the UEF, all HAP should be treated as styrene because this is how EPA developed the MACT floors. They noted that these factors are used by industry for toxic release inventory reporting and obtaining permits. According to the commenters, use of these factors for MACT will reduce the paperwork burden for small manufacturers.

Response: We reviewed the UEF and the basis for their development. Based on this review, we believe that these equations are acceptable for estimating both HAP emissions factors for compliance purposes and HAP emissions.

As a result, in the final rule we have written the HAP emissions factor equations in Table 1 to subpart WWWW of part 63 to be identical to their equivalent UEF equations. Therefore, facilities will have one set of identical factors for both compliance and HAP emissions estimation purposes.

Because of this change, it was necessary to recalculate the floor values by recalculating HAP emissions factors using the new HAP emissions factor equations for the facilities in our database and reranking the facilities based on the new calculations. Therefore, both the numerical values of the floors (lb/ton) and the equations used to calculate compliance changed. Note the floors themselves did not change significantly because when we reranked facilities using the new HAP emissions factors, the ranking order did not change with two exceptions. In those cases, the new equations caused two facilities to switch places and changed the floor slightly. However, these changes were minor compared to the changes that resulted from other comments we received and additional data we gathered.

In addition, we have added to the final rule equations for the nonatomized gel coat application and for the mechanical atomized controlled spraying of resins. We have incorporated the latter UEF equation in the final rule so that it is applicable only where the controlled spray is achieved through automated or robotic, not manual, spraying.

Finally, we are incorporating only the UEF equations developed for styrene and not those developed for MMA. We are doing this because the data analysis forming the basis of the standards assumed all organic HAP to be styrene. This is a reasonable assumption as the amount of MMA used is a very small percentage of the total HAP monomer used.

Comment: One commenter noted that the proposed rule does not provide for manual application of gel coats. Many gel coats are applied manually as exterior coatings when the major component part is made. The rule should require that for HAP emissions calculations from manual application, gel coat should be considered as a resin with the stated HAP content and the appropriate point value equation should be used. Companies where manual gel coat application is less than 2 percent of the total gel coat usage should be exempt from maintaining records of manual application.

Response: We agree with the commenter that the proposed rule did not provide an equation to estimate HAP emissions from the manual application of gel coats and that the rule needs to address this. In the final rule, we have addressed this issue by allowing two options. First, the facility may elect to simply include manually-applied gel coat with spray gel coat application for compliance and HAP emissions estimation purposes. Alternatively, they can elect to treat the gel coat as spray for compliance purposes, but use the manual resin application HAP emissions factor to estimate HAP emissions.

We believe the changes discussed above are sufficient to simplify reporting and recordkeeping for manual gel coat application. Therefore, we have not added an exemption for maintaining records for manual gel coat application.

Comment: Several commenters requested that sources be allowed to use HAP emissions factors in approved title V permits to estimate HAP emissions. It was noted that the use of such factors will reduce the administrative burden for sources and regulators and will likely improve HAP emissions estimates. One commenter suggested that such factors also be allowed to be used for compliance determinations.

Response: We agree with this comment and believe that § 63.5798(a)(1) and (2) of the final rule already allow for the use of facility-specific HAP emissions factors. Section 63.5798(a)(1) states, in part, that ''you may use any organic HAP emissions factor approved by us such as factors from the Compilation of Air Pollutant Emissions Factors, Volume I: Stationary Point and Area Sources (AP–42).'' Section 63.5798(a)(1) was not intended to limit organic HAP emissions factors only to the AP–42. Paragraph (a)(2) of § 63.5789 allows the development of facility-specific organic HAP emissions factors through performance testing. If a facility has facility-specific factors that have been approved for use in title V operating permits, then those factors can be used to determine whether or not the facility is a major source under section 112 of the CAA. In addition, a facility can use facility-specific factors for comparison against applicable HAP emissions limits. We have written the language in § 63.5798 of the final rule to clarify the use of such facility-specific factors and have added the provision that such factors must be supported by test data.

Comment: One commenter notes that the alternative point values in Table 5 to subpart WWWW of part 63 do not provide a realistic alternative to 95 percent capture and control. In an example calculation for 35 percent styrene resin in open molding, the point value calculation is equivalent to 96 percent control, which is more stringent than the add-on control requirement.

Response: While the values may not appear realistic for some facilities, Table 5 to subpart WWWW of part 63 does present the opportunity to meet the final standards using alternative means. We believe that the values in Table 5 to subpart WWWW of part 63 provide incentive to continue to pursue lower-HAP resins and gel coats and other pollution-prevention opportunities and that even if only one facility can use the values, then their inclusion is worthwhile. For these reasons, we have retained Table 5 to subpart WWWW of part 63. However, we have made minor modifications to this table. For process/product groupings where there is an operating facility that currently meets the 95 percent control requirement, we changed the value in Table 5 to subpart WWWW of part 63 to reflect the highest actual calculated HAP emissions factors for operating facilities.

Comment: One commenter stated that the weighted average point values should be calculated as a weighted average of resin used. The commenter pointed out that the equation in the current proposal gives equal weight to each month instead of each quantity of resin or gel coat processed. Another commenter asked for clarification on how the ''weighted average floor'' is calculated.

Response: We agree with the commenter that 12-month rolling average point values should be calculated using a weighted average based on the amount of resins, rather than using an average based on monthly values, as was proposed. Therefore, the final rule incorporates the commenters' suggestion. Also, we have changed the terminology for the averaging calculations. We now use the term ''emissions factor'' when discussing values calculated using actual resin and gel coat HAP contents, and ''emissions limit'' when discussing average values calculated from the required floor limits. This change should clarify how to calculate the weighted average floor.

Comment: Several commenters asked that EPA include a test method to determine the effectiveness of vapor suppressants. They suggested that the CFA-developed vapor suppressant test method be used.

Response: We agree with the commenter that the final rule should incorporate a test method applicable to vapor suppressants, which are effective at reducing HAP emissions for many resin applications. The effectiveness of vapor suppressants varies depending on the resin and the application technique used. Thus, a single effectiveness value cannot be assigned. The final rule, therefore, incorporates a test method to determine the effectiveness of vapor suppressants for facility-specific applications. This test method is being published as appendix A to subpart WWWW of 40 CFR part 63.

Comment: One commenter states that the proposed rule is vague or silent on key issues including continuous monitoring of the preconcentrator control performance. The commenter states that the question of the practical long-term efficiency of the preconcentrator system is particularly disturbing because the proposed rule is silent on the issue of compliance assurance. Unfortunately, compliance assurance will present three problems: no available parametric measure will work to monitor absorber efficiency; continuous or semi-continuous flame ionization detectors (FID) are the only practical alternative, but are unreliable; and automated FID equipment is very expensive and prone to periods of malfunction.

The commenter also states that the only feasible available continuous emissions monitor (CEM) system that can measure styrene is an automated sampling device based on an equivalent FID sensor as described in EPA Method 25A of appendix A–7 to 40 CFR part 60 that has an annual cost of $78,200 per year. The additional cost of this necessary compliance monitoring equipment was not included in the EPA cost analysis.

Response: We have reviewed the information on those facilities using add-on control devices with carbon adsorbers within the reinforced plastic composites industry and have found none that are using FID. These facilities are able to demonstrate compliance with 95 percent reduction. Therefore, we do not believe it is necessary to require use of FID under the final rule and have not included the cost of such devices in our cost analysis.

Comment: One commenter notes that the requirements for sources to determine the HAP content should be the same as those in the Boat Manufacturing NESHAP (40 CFR part 63, subpart VVVV). The commenter points out that the boat rule allows sources to use information from the supplier or manufacturer and requires the use of the upper limit of a range if a range is provided and allows use of supplier information as long as a measured value does not exceed the provided value by more than 2 percentage points. The commenter notes that suppliers provide many of the same resins and gel coats to boat manufacturers and composites manufacturers.

Response: We agree with the commenter and the final rule has been written in line with the HAP content determination provisions found in the Boat Manufacturing NESHAP, which in part allow up to a plus or minus 2 percent allowance.

Comment: One commenter stated that the rule should allow composites manufacturers to change compliance options and should provide guidance on notification and record keeping requirements if affected sources need to switch compliance options.

Response: We agree with the commenter and have included language in the final rule making it clear that changes in the selected compliance option are allowed.

Comment: One commenter opposed capture and control for pultrusion sources based on worker safety. The commenter notes that the EPA analysis assumes an inlet concentration of 100 ppmv, but their measured concentrations are about 12 ppmv. At that concentration, according to the commenter, capture and control is not viable. The commenter claims that efforts to increase the inlet concentration lead to OSHA and industrial hygiene concerns and that any changes increasing the concentration to over 20 ppmv would exceed American Congress of Governmental Industrial Hygienists recommended maximums. Further, the commenter states that levels approaching 50 ppmv require installation of engineering controls (ventilation or HAP prevention) and exposure to these levels would meet with serious union objections. The commenter notes that these considerations result in higher capture and control costs. The commenter requests that health related issues be fully addressed before the proposed above-the-floor capture and control is implemented. Another commenter stated that pultrusion products requiring constant attention would have to have an enclosure large enough for the operator to be inside, and this would increase health risks due to styrene exposures.

Response: As noted in previous responses, the above-the-floor requirement for 95 percent HAP emissions reduction is no longer required for pultrusion operations at existing sources and, therefore, capture and control is no longer an issue for existing facilities. We also note that our revised cost analysis now uses a target maximum inlet concentration of 50 ppmv rather than 100 ppmv. The 50 ppmv target is the same as the current OSHA 8-hour time weighted average limit for styrene.

We have not changed our position on capture and control for new sources, except, as discussed above, with respect to large parts made by pultrusion (and open molding) sources. New facilities can be designed with the appropriate measures in place to avoid worker exposure in excess of OSHA requirements. As previously discussed, facilities that have incorporated capture and control meet current OSHA requirements for worker safety.

Comment: Several commenters requested that preform injection, a technique that applies resin to the reinforcements in a closed box, be an allowed control technology because it is a more viable and readily attainable control technology than either add-on control or direct-die injection. One commenter stated that preform injection should qualify for a 90 percent HAP emissions reduction, and the CFA proposed definition and requirements should be used as the criteria for preform injection. A second commenter stated that although it falls short of 95 percent reduction, reduction rates of 90 percent are attainable and an excellent trade off given the applicability, capital requirements, and operating costs associated with preform injection.

Response: We agree with the commenters that preform injection is a viable control technology for reducing HAP emissions from pultrusion operations. Preform injection is included in the final rule as an option for meeting the 60 percent HAP emissions reduction requirement for existing pultrusion sources. However, as stated by the commenters, preform injection (and direct die injection) do not meet the 95 percent HAP emissions reduction requirement, which is the new source MACT floor. The CAA does not allow us to be less stringent than the floor. Therefore, we cannot allow preform injection, or direct die injection, to be a compliance option to meet the 95 percent HAP emissions reduction requirement. We also included a definition for preform injection in the final rule that is based on the commenter's suggested language.

Comment: Several commenters requested a 12-month averaging period for compliance for pultrusion. The commenters stated that pultruders should be able to use a combination of preform injection, wet area enclosures, direct die injection, and ''no control'' to meet the 60 percent HAP emissions reduction requirement for existing sources. The commenters pointed out that HAP emissions credits could be earned to offset the processing of products with an open bath and ''no control.'' According to the commenters, without averaging, facilities will be forced to discontinue manufacturing products that require constant open access (for example, certain complex profiles) or to shut down any processing line when there is an extended period of processing adjustments (which require open access to the line).

Response: We agree that averaging will add some flexibility for you to comply with the final rule without increasing HAP emissions. Therefore, for existing sources we have included an averaging option. For purposes of averaging, we have assigned wet area enclosures a 60 percent HAP emissions reduction, and direct die injection and preform injection a 90 percent HAP emissions reduction.

Comment: Several commenters requested that the 60 percent emission reduction requirement for existing sources, which is based in the use of a wet area enclosure, be replaced with a work practice standard of air flow management. They stated it was impossible to apply wet area enclosures to these large parts because of accessibility concerns. Large parts require almost constant access because they are extremely complex. The other control options for existing sources, preform injection and direct die injection, have also not been demonstrated on these large parts. They suggested a definition for large parts, which was parts with 1,000 or more reinforcements and at least a 60 square inch cross sectional area.

Response: We agree that wet area enclosures, which form the basis of the existing source floor, are not feasible for large parts as defined in the comment. Therefore, we developed a separate existing source MACT floor for large pultruded parts. A review of the available data indicates air flow management (as described in more detail in Table 4 to subpart WWWW of part 63) has been used to control emissions from this process group. Therefore, the existing source MACT floor is air flow management. The final rule has been written to reflect the new floor.

Comment: Many commenters requested that the limit on wet enclosure open times of 30 minutes per shift be changed to 90 minutes per day to allow for necessary repairs, start-ups, and shutdowns.

Response: We evaluated the commenters' request. The facilities that actually set the floor for pultrusion are limited to 30 minutes per 8 hour shift or 45 minutes per 12 hour shift. In addition, the facility may average over all pultrusion lines. We have included averaging provisions across lines in the final rule. We have also allowed a facility to have the doors and covers open 90 minutes per day providing the machine is operated three 8-hour shifts or two 12-hour shifts.

Comment: Three commenters claimed that the height restriction on wet area enclosures is not practical because it does not allow room above the highest part to make adjustments to the process or equipment. According to the commenters, the actual height of the wet area enclosure has no impact on HAP emissions because the puller window is the controlling factor, and styrene emissions will remain near the bath without air flow. The commenters, therefore, requested that the restriction be removed.

Response: We have no data to suggest that limiting the height of the enclosure affects the amount of HAP emissions reduction. Therefore, we did not include the height restrictions on the wet area enclosures in the final rule.

Comment: Commenters requested that capture and control not be required for sources engaged in SMC manufacturing. The commenter stated that EPA's proposal for control is based on one source and, according to the commenter, that source has found that they cannot operate the SMC operation and comply with EPA Method 204 of appendix M of 40 CFR part 51.

A second commenter stated that their SMC operation is permitted by Ohio EPA as a PTE with all HAP emissions vented to a thermal oxidizer. They have found it expensive to maintain the PTE and control device and may be required to install additional monitors at great expense.

Response: For existing sources, the final rule does not require capture and control for SMC manufacturing. For new sources, however, the floor is 95 percent reduction and we do not have the flexibility to change the floor. Most of the comments raised by the commenters relate to the cost of PTE and thermal oxidizers. However, costs may not be considered in setting the floor. Additionally, the problems with compliance noted by one commenter do not, in themselves, indicate that new sources cannot be designed and operated to meet the 95 percent control requirement. For example, the facility states that they must open a large overhead door to operate their second SMC machine. In a new facility, the plant layout can be designed where large doors are not required to be continually open. Therefore, the final rule retains the requirement of 95 percent capture and control for SMC manufacturing at new sources that exceed the 100 tpy of HAP emissions threshold.

Comment: One commenter noted that an alternative to meeting the 95 percent HAP emissions reduction requirement is provided for some operations and requests that an alternate HAP emissions limit be provided for SMC manufacturing. An alternative HAP emissions limit allows SMC manufacturers to utilize pollution-prevention efforts that have already been implemented and encourages the use of future pollution-prevention efforts.

Response: For SMC manufacturing, we have incorporated a HAP emissions limit of 2.4 lb/ton as a compliance alternative to the 95 percent control requirement in the final rule.

Comment: A number of commenters expressed concerns about the floor level of control for SMC manufacturing that is based on several work practices. They stated that the requirement to cover doctor boxes should be deleted because the boxes have to be open for machine operators to monitor paste levels. They also mentioned that folding the edges of the SMC had proved to create problems for some facilities that had tried the practice. Finally, they stated that the requirement to enclose the SMC in nylon film should actually say nylon-containing film.

Response: We evaluated the basis for the MACT floor by reviewing all of the data available prior to proposal and contained in the public comment letters. On the basis of this review, we discovered that the MACT floor at proposal did not accurately reflect the actual work practices currently being used. Therefore, we changed the floor to for both new and existing sources to cover or enclose the resin transport system up to the doctor box and use nylon-containing film to enclose the SMC. Based on the practices at the best controlled similar source, these work practices also apply to new sources that are above the 100 tpy threshold.

Comment: Several commenters requested that the requirement for ''no visible gaps in mixer covers'' be revised to allow reasonable and necessary openings. In general, they stated that mixing vessels must have some opening or vents to allow air to enter or leave the vessel when materials are added or removed, or when the contained material expands or contracts due to changes in temperature. Commenters also noted necessary clearance for mixing shafts and other instrumentation are essential and suggested allowing a gap of one inch. An additional commenter stated that they have several holding tanks that are continuously agitated to prevent settling. They requested that we add clarifying language to the definition of mixers to exclude tanks that are only agitated to prevent settling.

Response: Based on our review of the available data on the current industry control on mixing tanks, we found that the proposed rule is more stringent than the floor and that to allow some visible gaps around shafts, etc., is consistent with the data available to set the floor. Therefore, we have written the final rule to allow no more than one inch of visible gap around mixing shafts and any required instrumentation.

With regard to the request to exempt tanks that are agitated only to prevent settling, concern was that the mixing shafts required clearance. Because we have added a provision to allow up to a one inch clearance around the agitator shafts, this concern has been addressed and the suggested exemption for these specific types of mixers is not warranted. Therefore, the final rule does not include an exemption for tanks that agitate only to prevent settling.

Comment: Several commenters requested that the rule allow active venting under three conditions: when adding filler; when using nitrogen blanketing; and prior to opening a mixer. Several commenters stated that when powders are added to mixing tanks, vent gases are directed to a dust collector to protect employees. One commenter stated that you cannot capture dust without actively venting. The commenter suggests that the proposed rule allow active venting as part of the material addition process. Two commenters actively vent covered mixers at very low flow through a dust collector. The active flow results from nitrogen flowing through the air space for safety reasons (to prevent vapor buildup). Based on stack test results, HAP emissions under these conditions were found to be very low (0.000292 lb styrene/lb styrene available). For these reasons, active venting for safety reasons, using an inert gas purge, and at low flow, should be allowed for covered mixers. Another commenter stated that some mixing operations use nitrogen blanketing for safety (to prevent formation of flammable atmospheres). These sources have an incentive to limit use of nitrogen blanketing because of cost; so, HAP emissions will be negligible. Two commenters also requested that the rule allow venting just before adding materials to clear out vapors prior to opening covers and to allow venting just after adding powders to capture residual dust in the vapor space. One commenter also asked that the term ''active venting'' be defined in the rule.

Response: We believe that most HAP emissions that result from mixing operations occur when active mixing is taking place. Also, based on the data used to set the MACT floor, the facilities that responded that mixers have no active venting meant that the mixer was covered and not vented during mixing. As a result, we have written the rule requirement to read ''close any mixer vents when actual mixing is occurring, except that venting is allowed during addition of materials, or as necessary prior to adding materials or opening the cover for safety.'' Because we have removed the term ''active venting,'' no definition of this term is required.

Comment: One commenter believes that covers should be required instead of add-on control for larger mixing operations. According to the commenter, covers can reduce HAP emissions by 84.8 percent to 96 percent. The commenter then maintains that the incremental HAP emissions reduction from oxidation cannot justify the cost and energy use of control when compared to covers. The commenter notes that there are some facilities in EPA's database that use add-on controls for mixing. However, according to the commenter, the control in all cases is incidental to the use of the add-on control for other operations in the facility. Therefore, the commenter believes that add-on control is not the best control for mixing, and the final rule should require covers instead of add-on controls for all mixing operations.

Response: The reasons for why HAP emissions are being controlled is usually not considered in the setting of MACT standards. Further, we disagree with the commenter's characterization of the control of mixing HAP emissions as ''incidental.'' We do not agree that the data provided support the claim of 85 to 96 percent control using covers. Therefore, we have not written the rule as requested by the commenter. New sources that exceed the 100 tpy HAP emissions threshold will still have to cover the mixing tanks and control their HAP emissions from mixing by 95 percent, which is the new source floor level of control.

Comment: Two commenters suggested that the definition of compression molding be changed to include a process where resin paste is added to the reinforcement at the press and to include the use of in-mold coating (IMC). According to the commenters, the resin paste process is similar to the use of SMC and BMC because there is no exposure of HAP-containing material, except where the charge is being prepared and placed in the mold. The controls for this process are the same as those available for SMC and BMC (*i.e.* limiting the quantity of exposed materials to that which is required for one press cycle). In-mold coating is a process where HAP-containing materials are mixed with catalyst and then injected into the mold cavity after the molding cycle has started. The IMC reduces the need for post-mold coating (painting) operations. The controls available for IMC are the same as those generally available for mixing operations.

Response: We have modified the definition of closed molding to include these processes.

Comment: Several commenters requested that the work practice standard requiring closed molding operations to uncover, unwrap, or expose only one charge per mold cycle per machine be revised so that a charge is defined as the amount of materials required to charge the mold(s) for each machine cycle. Some machines have more than one mold, and limiting the amount of material would cause a bottleneck in production capacity. One commenter added that the rule should allow multiple charges to be loaded into the hopper, provided the hopper is kept covered between loading operations and that the unlimited use of slitting machines to unwrap, cut, and prepare charges should be permitted, provided that the charges are then covered or placed in a closed container prior to use at the press.

Response: We agree that where multiple charges are required for a single mold cycle, the rule should allow them to be prepared at the same time and held in a closed container prior to use. Therefore, we have written the final rule to define ''charge'' per the commenter's suggestion and to require that multiple charges be kept covered, as for single charges, until used. We have also written the final rule to allow the use of hoppers, robotic loaders, and slitters.

Comment: Many commenters noted in the proposed rule that polymer casting mixing operations in containers of 21 gallons or less may be open while active mixing occurs and requested that this exemption be increased. The commenters note that many are using 350 lb containers, which is equivalent to 21.6 gallons. According to the commenters, the mixing process uses an electric mixer and requires frequent manual scraping of the sides, and a requirement to cover the mixer would present a productivity disadvantage.

Response: Changing the volume exemption from 21 to 21.6 gallons would be consistent with the intent of the proposed exemption. The surface area of exempt mixers is a more important parameter because it is directly related to the amount of HAP emissions that would occur. Therefore, we have included this exemption in the final rule but have changed the exemption parameter to 500 square inches of surface area. This change should allow the 21.6 gallon mixers, commonly used in this industry, to be exempt from the requirement to cover the mixer.

Comment: One commenter noted that worker safety, fire prevention, and product quality requirements necessitate limited active venting of HAP-containing materials storage vessels, covered mixers, and material conveyance enclosures. Some facilities store resins in bulk tanks with passive atmospheric venting. Problems arise from resin contact with the water vapor in the atmosphere. Polymerization occurs on side walls, vents, and transfer pipes. Vents, especially conservation vents, can plug, threatening the tank's structural integrity. Nitrogen blanketing is used by some facilities to solve these problems. Nitrogen blanketing is also used to inert the head space in bulk HAP-containing materials storage tanks for fire prevention.

Another commenter requested clarifying language to allow passive vents for bulk HAP-containing materials storage tanks. The vents are small to allow for breathing of the tanks as they are filled and emptied. These vents are required under OSHA to prevent pressure build-up and to reduce the chances of explosions and major leaks or spills. The annual breathing losses from all eight of this commenter's tanks are less than 1 tpy. A third commenter suggested that the rule be changed to allow venting from HAP-containing materials storage vessels.

Response: We did not intend to prohibit bulk HAP-containing materials storage tanks from venting to the atmosphere for safety. The final rule has been written to clarify this. However, it is not our intent to allow venting from all HAP-containing materials storage vessels because the safety concerns commenters raised are limited to bulk HAP-containing materials storage vessels. Thus, the final rule prohibits venting from HAP-containing materials storage vessels other than bulk storage tanks.

Comment: One commenter noted that the proposed rule would require that HAP-containing materials storage containers be kept closed or covered, except when adding or removing materials. The commenter claims this provision is not workable.

Response: We believe that covering HAP-containing materials storage containers is a simple and cost-effective way to reduce styrene evaporation. We also note that over 200 facilities that reported information on storage stated that HAP-containing materials storage containers are covered or closed. This provision has been written in the final rule.

Comment: Several commenters requested that HAP cleaners be allowed when used in a closed system or covered tank. The reasons were that aggressive cleaners were necessary due to the presence of cured resin on some surfaces, and that it was important to use a cleaner that would not cause contamination problems. They stated that HAP emissions from these closed systems were minimal, and in many cases, the styrene used for cleaning was recycled to the process as a raw material.

Response: The proposed rule allowed the use of HAP cleaners to remove cured resin from application equipment because of the difficulty associated with removing the cured resin. One commenter in particular identified other equipment used in the process on which cured resin may occur. We note, as the commenters have, that styrene is the main HAP used in the reinforced plastic composites industry and can be reused in the process without contaminating the end products. Therefore, we believe that the commenters' requests are reasonable and have written the final rule to expand the definition of ''application equipment'' and to allow the use of HAP-containing cleaners in closed systems (including covered tanks).

VI. Relationship of the Final NESHAP to Other NESHAP and the CAA Operating Permits Program

A. National Emissions Standards for Closed Vent Systems, Control Devices, Recovery Devices, and Routing to a Fuel Gas System or a Process (40 CFR Part 63, Subpart SS)

If you use an add-on control device(s) to control HAP emissions, you will need to comply with certain provisions in 40 CFR part 63, subpart SS, for add-on controls. The standards in subpart SS, cited by the final Reinforced Plastic Composites NESHAP, are applicable to most sources using an add-on control device. The final Reinforced Plastic Composites NESHAP cite these sections in subpart SS rather than repeating them in the regulatory text.

B. NESHAP for Boat Manufacturing (40 CFR Part 63, Subpart VVVV)

The final NESHAP for Boat Manufacturing were published on August 22, 2001 (66 FR 44218). There is a potential overlap between facilities that produce reinforced plastic composites if they also produce boat hulls, boat decks, or molds for boat hulls and decks. We have included provisions in the Reinforced Plastic Composites NESHAP to clarify where the Reinforced Plastic Composites NESHAP apply, and where the Boat Manufacturing NESHAP (40 CFR part 63, subpart VVVV) apply.

C. NESHAP for Plastic Parts and Products (Surface Coating)

There are currently NESHAP under development for proposal that will regulate coating of plastic parts and products. The Small Business Advocacy Review Panel, convened for the Reinforced Plastic Composites NESHAP, recommended that we consider the interaction of the Reinforced Plastic Composites NESHAP and the Plastic Parts and Products NESHAP. The Plastic Parts and Products NESHAP may potentially affect facilities that produce reinforced plastic parts and then apply a coating to the finished parts. We have coordinated with this project and have determined that there should be no overlap (*i.e.,* specific operations covered by today's final NESHAP should not also be covered in the Plastic Parts and Products NESHAP). We have not determined any requirements of today's final NESHAP that would overlap, conflict, or cause a duplication of effort.

D. Operating Permit Program

Under the operating permit program codified at 40 CFR part 70 and 40 CFR part 71, all major sources subject to standards under section 111 or 112 of the CAA must obtain an operating permit (*See* §§ 70.3(a)(1) and 71.3(a)(1)). Therefore, all major sources subject to the final NESHAP must obtain an operating permit.

Some reinforced plastic composites production facilities may be major sources based solely on their potential to emit, even though their actual HAP emissions are below the major source level. These facilities may choose to obtain a federally enforceable limit on their potential to emit so that they are no longer considered major sources subject to the final NESHAP. Sources that opt to limit their potential to emit (*e.g.,* limits on operating hours or amount of material used) are referred to by the EPA as ''synthetic area'' sources. To become a synthetic area source, you must contact your local permitting authority to obtain an operating permit with the appropriate operating limits. These limits must be obtained prior to the compliance date for existing sources, which is April 21, 2006. These operating limits will then be federally enforceable under 40 CFR 70.6(b).

VII. Statutory and Executive Order Reviews

A. Executive Order 12866, Regulatory Planning and Review

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

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

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

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

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

Pursuant to the terms of Executive Order 12866, OMB notified EPA at proposal that it considered this rulemaking a ''significant regulatory action'' within the meaning of the Executive Order. The EPA submitted the proposed rule to OMB for review. Changes made in response to suggestions or recommendations from OMB are documented and included in the public record. The OMB has informed EPA that it no longer considers this action significant. Therefore, it is not subject to further OMB review. The OMB did request a copy of the final regulation and preamble prior to publication. However, they did not request any changes in the final rule.

B. Paperwork Reduction Act

The information collection requirements in the final rule have been submitted for approval to the OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* An information collection request (ICR) document has been prepared by EPA (ICR No. 1976.01) and a copy may be obtained from Susan Auby by mail at the Office of Environmental Information, Collection Strategies Division (2822), U.S. EPA, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, by e-mail at ''*auby.susan@epa.gov,*'' or by calling (202) 566–1672. A copy may also be downloaded from the internet at *http://www.epa.gov/icr.* The information requirements are not enforceable until OMB approves them.

The final rule contains monitoring, reporting, and recordkeeping requirements. These notices and reports are the minimum needed by us to determine if you are subject to the NESHAP and whether you are in compliance. These recordkeeping requirements are the minimum necessary to determine initial and ongoing compliance. Based on reported information, we would decide which reinforced plastic composites facilities 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.

We expect the final rule to affect a total of approximately 488 facilities over the first 3 years. This includes 435 existing facilities, and 53 new reinforced plastic composites facilities that will become subject to the final NESHAP during the first 3 years.

The estimated average annual burden for the first 3 years after promulgation of the final NESHAP 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. 1976.01,'' in Docket ID No. OAR–2003–0003 (formerly Docket No. A–94–52).

Affected entity	Total hours	Labor costs	Total annual O&M costs	Total costs
Industry	13,785	$613,623	$15,807	$629,431
Implementing agency	11,120	444,047	NA	444,047

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.

C. Regulatory Flexibility Analysis

The EPA has prepared a Final Regulatory Flexibility Analysis (FRFA) in connection with the final rule. For purposes of assessing the impacts of today's final rule on small entities, small entity is defined as: (1) A small business ranging from 500 to 1,000 employees as defined by the Small Business Administration's size standards; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field. The table below presents the size threshold for small businesses by NAICS Codes.

Category	NAICS codes	Maximum number of employees to be considered a small business
Manufacturing	335312 336211 336112 33612 336213 336413 33651	1000
	325211 327993 332998 33312 33651 335311 335313 33422 33653 336399	750
	All other identified NAICS Codes in this source category	500

In accordance with section 603 of the RFA, EPA prepared an initial regulatory flexibility analysis (IRFA) for the proposed rule and convened a Small Business Advocacy Review Panel to obtain advice and recommendations of representatives of the regulated small entities in accordance with section 609(b) of the RFA (*see* 66 FR 40324). A detailed discussion of the Panel's advice and recommendations is found in Docket ID No. OAR–2003–0003 (formerly Docket No. A–94–52). A summary of the panel's recommendations is presented below.

We have also prepared a FRFA for today's rule. The FRFA addresses the issues raised by public comments on the IRFA. The FRFA is available in the docket and is summarized below.

Section 112 of the CAA requires us to list categories and subcategories of major sources and, in some cases, area sources of HAP and to establish NESHAP for the listed source categories and subcategories. The Reinforced Plastic Composites Production source category (major sources only) was included on the initial list of source categories published on July 16, 1992 (57 FR 31576). Major sources of HAP are those that have the potential to emit greater than 10 tpy of any one HAP or 25 tpy of any combination of HAP.

The objective of the final rule is to apply standards based on MACT to all major sources in this source category. The criteria used to establish MACT are contained in section 112(d) of the CAA.

We received several comments on the economic analysis for the proposed rule. However, these comments related to the general analysis methodology and were mainly focused on the above-the-floor requirements. These requirements did not impact any small businesses in our analysis. We had no comments specifically in the IRFA.

Based on SBA size definitions and reported sales and employment data, we identified 279 of the 357 companies owning reinforced plastic composites facilities as small businesses. Although small businesses represent almost 80 percent of the companies within the source category, they are expected to incur 53 percent of the total industry compliance costs of $21.5 million. The average total annual compliance cost is projected to be $40,000 per small company, compared to the industry average of $60,000 per company. Under the final standards, the mean annual compliance cost, as a share of sales, for small businesses is 0.8 percent, and the median is 0.5 percent, with a range of 0.01 to 9.6 percent. We estimate that 24 percent of small businesses (or 67 firms) may experience an impact greater than 1 percent of sales, and 5 percent of small businesses (or 14 firms) may experience an impact greater than 3 percent of sales.

We also performed an economic impact analysis (EIA) that accounted for firm behavior to provide an estimate of the facility and market impacts of the final rule. This industry is characterized by profit margins of 3 to 4 percent. Small businesses were found to have higher per-unit production costs under baseline conditions and incur slightly higher per-unit compliance costs. As a result of these factors, the economic analysis indicates that 12 percent of facilities owned by small business are at risk of closure because of the final rule. Note that this number is slightly higher then the estimate at proposal, which was 10 percent. This change is not due to any change in stringency of the rule as applied to small businesses. It is due to the reduction in stringency of the rule for large businesses.

Although any facility closures are cause for concern, the number of facilities at risk for closure would be the same if the final rule required only the MACT floor level of control for all facilities. The MACT floor is the least stringent level allowed by statute.

The proposed rule contained significant accommodations for small businesses where requirements were more stringent then the MACT floor for existing sources. Since these above-the-floor requirements for existing sources have been eliminated in the final rule for all process/product groupings except centrifugal casting and continuous lamination/casting, these accommodations for small business are no longer necessary.

Other accommodations originally included to aid small businesses were extended to all businesses at proposal and have been retained in the final NESHAP.

In the proposed rule, there were different HAP emissions thresholds above which an existing facility had to comply with more stringent above-the-floor requirements of 95 percent capture and control. This threshold was 250 tpy of HAP emissions for small businesses and 100 tpy for large businesses. In the final rule, we have removed the above-the-floor capture and control requirements for existing sources, except for those with centrifugal casting or continuous lamination/casting, and we have established a single threshold of 100 tpy for these existing sources, whether they are small or large businesses. Based on our analysis, setting the threshold at 100 tpy for these sources, rather than retaining the proposed 100 tpy for large businesses and 250 tpy for small businesses, does not result in any additional impacts on small businesses. This is because we have no facilities that emit over 100 tpy, but less than 250 tpy, of HAP from centrifugal casting or continuous lamination/casting processes, and are small businesses.

The reporting and recordkeeping requirements for these small businesses include initial notifications, startup notifications and compliance reports. These requirements were discussed in more detail under the discussion of the Paperwork Reduction Act above. We estimate that 301 existing facilities owned by small businesses will be impacted by these requirements, and 53 new facilities owned by small businesses will be impacted in the first 3 years. The professional skills required to complete these reports include the ability to calculate HAP emissions and resin use and read and follow report format guidance. All facilities impacted by the final rule are predicted to have personnel with the necessary skills because they would need these skills to comply with other regulatory requirements, such as Toxic Release Inventory (TRI) reporting.

Provisions to minimize the reporting and recordkeeping requirements on small business have been incorporated into the final rule. These provisions include allowing the facility to substantiate resin and gel coat HAP contents using MSDS rather than requiring testing of each resin and gel coat; use of resin purchase records to determine resin use; and exemption of facilities that can demonstrate that all their resin and gel coats comply with the required HAP content limits from the requirement to keep records of resin use and calculate HAP emissions factor averages. These provisions have also been extended to all companies subject to today's final NESHAP.

These facilities may also be subject to the NESHAP being developed for plastic parts and products. There should be no duplication of effort as a result of the Reinforced Plastic Composites NESHAP and the Plastic Parts and Products NESHAP being developed because the Reinforced Plastic Composites NESHAP will cover different operations. Facilities subject to the final rule are also subject to HAP emissions estimate reporting under the TRI requirements. In the final rule, we could determine no ways to combine TRI and the reporting requirements of the NESHAP because the objectives and statutory authorities of these requirements are different.

As indicated above, we have incorporated significant alternatives into the final rule to minimize the impact on small businesses but still meet the objectives of the CAA.

As required by section 609(b) of the RFA, EPA conducted outreach to small entities and convened a SBAR panel to review advice and recommendations from representatives of the small entities that potentially would be subject to the proposed rule requirements.

Consistent with RFA/SBREFA requirements, the panel evaluated the assembled materials and small-entity comments on issues related to the elements of the IRFA. A copy of the panel report is included in the docket.

The panel considered numerous regulatory flexibility options in response to concerns raised by the small entity representatives. The major concerns included the affordability and technical feasibility of add-on controls, the resin and gel coat HAP contents required to meet some of the MACT floors, and the regulatory treatment of specialty products.

These are the major panel recommendations and EPA's response in today's final rule:

• Recommend setting higher thresholds for small businesses than EPA had initially considered for requirements to use add-on controls.

Response: In today's action, EPA has removed the requirements for add-on controls for open molding, pultrusion, SMC and BMC manufacturing, and mixing operations at existing sources. We are retaining this above-the-floor requirement for centrifugal casting and continuous lamination/casting operations at existing sources and setting a single threshold of 100 tpy applicable to both small and large businesses. Setting a common threshold at 100 tpy does not increase the impacts on any small business because we identified no small-business owned sources that are impacted as the result of the decision to set a single threshold. Also, the original reason for setting different existing source thresholds for small versus large businesses were the impacts of the capital cost of add-on controls for open molding, pultrusion, SMC and BMC manufacturing, and mixing. Because existing sources that have these operations are no longer subject to any above-the-floor add-on control requirements, the original reason for having the different thresholds no longer exists.

The following recommendations were developed for small businesses, but were extended to both large and small business in the proposed rule and in the final rule.

• Recommend setting the new source floor for small-owned sources at the level of the existing source floor.

Response: Today's final rule includes this provision.

• Recommend establishing separate floors for specialty products.

Response: Today's final rule includes provisions for special products.

• Explore pollution-prevention alternatives to add-on controls.

Response: The EPA did explore this possibility with industry sources. We could not devise a workable pollution-prevention alternative to include in the proposed rule and requested comment. The only comments received on a pollution-prevention alternative were for the pultrusion process/product grouping. In the final rule, we have incorporated a new pollution-prevention technology recommended in the comments as a compliance alternative for pultrusion operations.

• Recommend allowing individual facilities to use the same resin in all resin application processes.

Response: Today's final rule includes this provision.

• Reconsider the resin HAP content requirement for tooling resins.

Response: We requested additional information on tooling resins subsequent to proposal. Based on information we received, the floor for manual application of tooling resins was made less stringent. The available data still indicate that the floor for mechanical tooling resins in the proposed rule was appropriate.

• Recommend separate floors for white/off-white gel coats and other pigmented gel coats.

Response: Today's final rule includes this provision.

• Reconsider the Agency's estimates of the cost of add-on controls.

Response: We conducted a thorough review of our costs for add-on controls and made significant revisions to the cost estimates. As a result, the add-on control requirements have been removed for open molding, pultrusion, SMC and BMC manufacturing and mixing operations at existing sources.

• Recommend grouping high-strength applications with corrosion-resistant operations.

Response: Today's final rule includes this provision.

As contemplated by Section 212 of SBREFA, EPA is also preparing a small entity compliance guide to help small entities comply with this rule. This guide will be made available on EPA's air toxics website, *http://www.epa.gov/ttn/atw/* by April 21, 2004.

D. Unfunded Mandates Reform Act

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

The EPA has determined that the final rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. The total cost to the private sector is approximately $21.5 million per year for existing sources and $7.7 million per year for new sources. The 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.

In adopting the final rule, we have chosen regulatory alternatives that are the minimum mandated by the CAA with one exception. For existing centrifugal casting and continuous lamination/casting operations that emit over 100 tpy from these operations, we have chosen a regulatory alternative of 95 percent capture and control, rather than the minimum level of control required under the CAA. We choose this alternative because it results in additional HAP emissions reductions from these processes with a cost per ton of HAP reductions we consider to be reasonable.

We have determined that the 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.

E. 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.''

The final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. No reinforced plastic composites production facilities subject to the final NESHAP are owned by State or local governments. Therefore, State and local governments will not have any direct compliance costs resulting from the final rule. Furthermore, the final NESHAP do not require these governments to take on any new responsibilities. Therefore, Executive Order 13132 does not apply to the final rule.

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

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.'' The final rule does not have tribal implications as specified in Executive Order 13175. 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, because we are not aware of any Indian tribal governments or communities affected by the final rule. Thus, Executive Order 13175 does not apply to the final rule.

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

Executive Order 13045 (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 we have reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency. The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. The final rule is not subject to Executive Order 13045 because it is based on technology performance and not on health or safety risks.

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

This rule is not a ''significant energy action'' as defined in Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001), because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. We determined that the overall energy demand for operations in the Reinforced Plastic Composites Production source category could increase by 10 million standard cubic feet per year of natural gas, and 0.6 million kilowatt hours of electricity per year as a result of the final rule. These are not significant adverse effects under the Executive Order.

I. National Technology Transfer Advancement Act

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

This rulemaking involves technical standards. The EPA cites in this rule the EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 3, 3A, 3B, 4, 18, 25, 25A, 204, and 204B, C, D, E. 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, 204B–E. The search and review results have been documented and are placed in Docket ID No. OAR–2003–0003 (formerly Docket No. A–94–52).

Three voluntary consensus standards were identified as acceptable alternatives to EPA test methods for the purposes of this rule.

The voluntary consensus standard ASME PTC 19.10–1981–Part 10, ''Flue and Exhaust Gas Analyses,'' is cited in this rule for its manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas. This part of ASME PTC 19.10–1981–Part 10 is an acceptable alternative to Method 3B.

The 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 the final rule, in addition to the currently available 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 the target compound(s) are those listed in Section 1.1 of ASTM D6420–99, and the target concentration is between 150 parts per billion volume and 100 ppmv.

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

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

The EPA requested comments on proposed compliance demonstration requirements in the proposed rule, and specifically invited the public to identify potentially applicable voluntary consensus standards. The only comment we received on voluntary consensus standards was that we should allow the use of the vapor suppressant effectiveness test protocol developed by the CFA to determine vapor suppressant effectiveness. We have reviewed the information supplied by the commenter and have incorporated this test method, ''Vapor Suppressant Effectiveness Test Protocol,'' into the final rule as appendix A to subpart WWWW of 40 CFR part 63.

The search for emissions measurement procedures identified 13 additional voluntary consensus standards potentially applicable to the final rule. The EPA determined that 11 of these 13 standards were impractical alternatives to EPA test methods for the purposes of this rulemaking. Therefore, EPA will not adopt these standards today. The reasons for this determination for the 11 methods are in the docket.

The following two voluntary consensus standards identified in this search were not available at the time the review was conducted for the purposes of this rulemaking 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); and ASME/BSR MFC 12M, ''Flow in Closed Conduits Using Multiport Averaging Pitot Primary Flowmeters,'' for EPA Method 2.

Section 63.5850 and Table 6 to subpart WWWW of part 63 list the EPA testing methods included in the final rule. Under §§ 63.7(f) and 63.8(f) of subpart A of the General Provisions, a source may apply to EPA for permission to use alternative test methods or alternative monitoring requirements in place of any of the EPA testing methods, performance specifications, or procedures.

J. 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 the final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the 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). The final rule will be effective on April 21, 2003.

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Hazardous air pollutants, Incorporation by reference, Reporting and recordkeeping requirements, and Volatile organic compounds.

Dated: February 28, 2003.

Christine Todd Whitman,

Administrator.

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

PART 63—[AMENDED]

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

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

■ 2. Section 63.14 is amended by adding paragraph (b)(29) to read as follows:

§ 63.14 Incorporations by reference.

* * * * *

(b) * * *

(29) ASTM D6420–99, Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, IBR approved for §§ 63.5799 and 63.5850.

* * * * *

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

Subpart WWWW—National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production

Sec.

What This Subpart Covers

What This Subpart Covers

§ 63.5780 What is the purpose of this subpart?

This subpart establishes national emissions standards for hazardous air pollutants (NESHAP) for reinforced plastic composites production. This subpart also establishes requirements to demonstrate initial and continuous compliance with the hazardous air pollutants (HAP) emissions standards.

§ 63.5785 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate a reinforced plastic composites production facility that is located at a major source of HAP emissions. Reinforced plastic composites production is limited to operations in which reinforced and/or nonreinforced plastic composites or plastic molding compounds are manufactured using thermoset resins and/or gel coats that contain styrene to produce plastic composites. The resins and gel coats may also contain materials designed to enhance the chemical, physical, and/or thermal properties of the product. Reinforced plastic composites production also includes cleaning, mixing, HAP-containing materials storage, and repair operations associated with the production of plastic composites.

(b) You are not subject to this subpart if your facility only repairs reinforced plastic composites. Repair includes the non-routine manufacture of individual components or parts intended to repair a larger item as defined in § 63.5935

(c) You are not subject to this subpart if your facility is a research and development facility as defined in section 112(c)(7) of the Clean Air Act (CAA).

(d) You are not subject to this subpart if your reinforced plastic composites operations use less than 1.2 tons per year (tpy) of thermoset resins and gel coats that contain styrene combined.

§ 63.5787 What if I also manufacture fiberglass boats or boat parts?

(a) If your source meets the applicability criteria in § 63.5785, and is not subject to the Boat Manufacturing NESHAP (40 CFR part 63, subpart VVVV), you are subject to this subpart regardless of the final use of the parts you manufacture.

(b) If your source is subject to 40 CFR part 63, subpart VVVV, and all the reinforced plastic composites you manufacture are used in manufacturing your boats, you are not subject to this subpart.

(c) If you are subject to 40 CFR part 63, subpart VVVV, and meet the applicability criteria in § 63.5785, and produce reinforced plastic composites that are not used in fiberglass boat manufacture at your facility, all operations associated with the manufacture of the reinforced plastic composites parts that are not used in fiberglass boat manufacture at your facility are subject to this subpart, except as noted in paragraph (d) of this section.

(d) Facilities potentially subject to both this subpart and 40 CFR part 63, subpart VVVV may elect to have the operations in paragraph (c) of this section covered by 40 CFR part 63, subpart VVVV, in lieu of this subpart, if they can demonstrate that this will not result in any organic HAP emissions increase compared to complying with this subpart.

§ 63.5790 What parts of my plant does this subpart cover?

(a) This subpart applies to each new or existing affected source at reinforced plastic composites production facilities.

(b) The affected source consists of all parts of your facility engaged in the following operations: Open molding, closed molding, centrifugal casting, continuous lamination, continuous casting, polymer casting, pultrusion, sheet molding compound (SMC) manufacturing, bulk molding compound (BMC) manufacturing, mixing, cleaning of equipment used in reinforced plastic composites manufacture, HAP-containing materials storage, and repair operations on parts you also manufacture.

(c) The following operations are specifically excluded from any requirements in this subpart: Application of mold sealing and release agents, mold stripping and cleaning, repair of parts that you did not manufacture, including non-routine manufacturing of parts, personal activities that are not part of the manufacturing operations (such as hobby shops on military bases), prepreg materials as defined in § 63.5935, non-gel coat surface coatings, repair or production materials that do not contain resin or gel coat, and research and development operations as defined in section 112(c)(7) of the CAA.

(d) Production resins that must meet military specifications are allowed to meet the organic HAP limit contained in that specification. In order for this exemption to be used, you must supply to the permitting authority the specifications certified as accurate by the military procurement officer, and those specifications must state a requirement for a specific resin, or a specific resin HAP content. Production resins for which this exemption is used must be applied with nonatomizing resin application equipment unless you can demonstrate this is infeasible. You must keep a record of the resins for which you are using this exemption.

§ 63.5795 How do I know if my reinforced plastic composites production facility is a new affected source or an existing affected source?

(a) A reinforced plastic composites production facility is a new affected source if it meets all the criteria in paragraphs (a)(1) and (2) of this section.

(1) You commence construction of the affected source after August 2, 2001.

(2) You commence construction, and no other reinforced plastic composites production affected source exists at that site.

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

Calculating Organic HAP Emissions Factors for Open Molding and Centrifugal Casting

§ 63.5796 What are the organic HAP emissions factor equations in Table 1 to this subpart, and how are they used in this subpart?

Emissions factors are used in this subpart to determine compliance with certain organic HAP emissions limits in Tables 3 and 5 to this subpart. You may use the equations in Table 1 to this subpart to calculate your emissions factors. Equations are available for each open molding operation and centrifugal casting operation and have units of pounds of organic HAP emitted per ton (lb/ton) of resin or gel coat applied. These equations are intended to provide a method for you to demonstrate compliance without the need to conduct for a HAP emissions test. In lieu of these equations, you can elect to use site-specific organic HAP emissions factors to demonstrate compliance provided your site-specific organic HAP emissions factors are incorporated in the facility's air emissions permit and are based on actual facility HAP emissions test data. You may also use the organic HAP emissions factors calculated using the equations in Table 1 to this subpart, combined with resin and gel coat use data, to calculate your organic HAP emissions.

63.5797 How do I determine the organic HAP content of my resins and gel coats?

In order to determine the organic HAP content of resins and gel coats, you may rely on information provided by the material manufacturer, such as manufacturer's formulation data and material safety data sheets (MSDS), using the procedures specified in paragraphs (a) through (c) of this section, as applicable.

(a) Include in the organic HAP total each organic HAP that is present at 0.1 percent by mass or more for Occupational Safety and Health Administration-defined carcinogens, as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other organic HAP compounds.

(b) If the organic HAP content is provided by the material supplier or manufacturer as a range, you must use the upper limit of the range for determining compliance. If a separate measurement of the total organic HAP content, such as an analysis of the material by EPA Method 311 of appendix A to 40 CFR part 63, 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.

(c) If the organic HAP content is provided as a single value, you may use that value to determine compliance. If a separate measurement of the total organic HAP content is made and is less than 2 percentage points higher than the value for total organic HAP content provided by the material supplier or manufacturer, then you still 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.

§ 63.5798 What if I want to use, or I manufacture, an application technology (new or existing) whose organic HAP emissions characteristics are not represented by the equations in Table 1 to this subpart?

If you wish to use a resin or gel coat application technology (new or existing), whose emission characteristics are not represented by the equations in Table 1 to this subpart, you may use the procedures in paragraphs (a) or (b) of this section to establish an organic HAP emissions factor. This organic HAP emissions factor may then be used to determine compliance with the emission limits in this subpart, and to calculate facility organic HAP emissions.

(a) Perform a organic HAP emissions test to determine a site-specific organic HAP emissions factor using the test procedures in § 63.5850.

(b) Submit a petition to the Administrator for administrative review of this subpart. This petition must contain a description of the resin or gel coat application technology and supporting organic HAP emissions test data obtained using EPA test methods or their equivalent. The emission test data should be obtained using a range of resin or gel coat HAP contents to demonstrate the effectiveness of the technology under the different conditions, and to demonstrate that the technology will be effective at different sites. We will review the submitted data, and, if appropriate, update the equations in Table 1 to this subpart.

§ 63.5799 How do I calculate my facility's organic HAP emissions on a tpy basis for purposes of determining which paragraphs of § 63.5805 apply?

To calculate your facility's organic HAP emissions in tpy for purposes of determining which paragraphs in § 63.5805 apply to you, you must use the procedures in either paragraph (a) of this section for new facilities prior to startup, or paragraph (b) of this section for existing facilities and new facilities after startup. You are not required to calculate or report emissions under this section if you are an existing facility that does not have centrifugal casting or continuous lamination/casting operations, or a new facility that does not have any of the following operations: Open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC and BMC manufacturing, and mixing. Emissions calculation and emission reporting procedures in other sections of this subpart still apply. Calculate organic HAP emissions prior to any add-on control device, and do not include organic HAP emissions from any resin or gel coat used in operations subject to the Boat Manufacturing NESHAP, 40 CFR part 63, subpart VVVV, or from the manufacture of large parts as defined in § 63.5805(d)(2). For centrifugal casting operations at existing facilities, do not include any organic HAP emissions where resin or gel coat is applied to an open centrifugal mold using open molding application techniques. Table 1 and the Table 1 footnotes to this subpart present more information on calculating centrifugal casting organic HAP emissions. The timing and reporting of these calculations is discussed in paragraph (c) of this section.

(a) For new facilities prior to startup, calculate a weighted average organic HAP emissions factor for the operations specified in § 63.5805(b) and (d) on a lbs/ton of resin and gel coat basis. Base the weighted average on your projected operation for the 12 months subsequent to facility startup. Multiply the weighted average organic HAP emissions factor by projected resin use over the same period. You may calculate your organic HAP emissions factor based on the factors in Table 1 to this subpart, or you may use any HAP emissions factor approved by us, such as factors from the Compilation of Air Pollutant Emissions Factors, Volume I: Stationary Point and Area Sources (AP–42), or organic HAP emissions test data from similar facilities.

(b) For existing facilities and new facilities after startup, you may use the procedures in either paragraph (b)(1) or (2) of this section. If the emission factors for an existing facility have changed over the period of time prior to their initial compliance date due to incorporation of pollution-prevention control techniques, existing facilities may base the average emission factor on their operations as they exist on the compliance date. If an existing facility has accepted an enforceable permit limit of less than 100 tons per year of HAP, and can demonstrate that they will operate at that level subsequent to the compliance date, the they can be deemed to be below the 100 tpy threshold.

(1) *Use a calculated emission factor.* Calculate a weighted average organic HAP emissions factor on a lbs/ton of resin and gel coat basis. Base the weighted average on the prior 12 months of operation. Multiply the weighted average organic HAP emissions factor by resin and gel coat use over the same period. You may calculate this organic HAP emissions factor based on the equations in Table 1 to this subpart, or you may use any organic HAP emissions factor approved by us, such as factors from AP–42, or site-specific organic HAP emissions factors if they are supported by HAP emissions test data.

(2) *Conduct performance testing.* Conduct performance testing using the test procedures in § 63.5850 to determine a site-specific organic HAP emissions factor in units of lbs/ton of resin and gel coat used. Conduct the test

under conditions expected to result in the highest possible organic HAP emissions. Multiply this factor by annual resin and gel coat use to determine annual organic HAP emissions. This calculation must be repeated and reported annually.

(c) Existing facilities must initially perform this calculation based on their 12 months of operation prior to April 21, 2003, and include this information with their initial notification report. Existing facilities must repeat the calculation based on their resin and gel coat use in the 12 months prior to their initial compliance date, and submit this information with their initial compliance report. After their initial compliance date, existing and new facilities must recalculate organic HAP emissions over the 12-month period ending June 30 or December 31, whichever date is the first date following their compliance date specified in § 63.5800. Subsequent calculations should cover the periods in the semiannual compliance reports.

Compliance Dates and Standards

§ 63.5800 When do I have to comply with this subpart?

You must comply with the standards in this subpart by the dates specified in Table 2 to this subpart. Facilities meeting a organic HAP emissions standard based on a 12-month rolling average must begin collecting data on the compliance date in order to demonstrate compliance.

§ 63.5805 What standards must I meet to comply with this subpart?

You must meet the requirements of paragraphs (a) through (h) of this section that apply to you. You may elect to comply using any options to meeting these standards described in §§ 63.5810 through 63.5830. Use the procedures in § 63.5799 to determine if you meet or exceed the 100 tpy threshold.

(a) If you have an existing facility that does not have any centrifugal casting or continuous lamination/casting operations, or an existing facility that does have centrifugal casting or continuous lamination/casting operations, but the combination of all centrifugal casting and continuous lamination/casting operations emit less than 100 tpy of HAP, you must meet the annual average organic HAP emissions limits in Table 3 to this subpart and the work practice standards in Table 4 to this subpart that apply to you.

(b) If you have an existing facility that emits 100 tpy or more of HAP from the combination of all centrifugal casting and continuous lamination/casting operations, you must reduce the total organic HAP emissions from these operations by at least 95 percent by weight and meet any applicable work practice standards in Table 4 to this subpart that apply to you. Operations other than centrifugal casting, and continuous lamination/casting, must meet the requirements in Tables 3 and 4 to this subpart. As an alternative to meeting 95 percent by weight, you may meet the organic HAP emissions limits in Table 5 to this subpart. If you have a continuous lamination/casting operation, that operation may alternatively meet a organic HAP emissions limit of 1.47 lbs/ton of neat resin plus and neat gel coat plus applied. For centrifugal casting, the percent reduction requirement does not apply to organic HAP emissions that occur during resin application onto an open centrifugal casting mold using open molding application techniques.

(c) If you have a new facility that emits less than 100 tpy of HAP from the combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC manufacturing, mixing, and BMC manufacturing, you must meet the annual average organic HAP emissions limits in Table 3 to this subpart and the work practice standards in Table 4 to this subpart that apply to you.

(d)(1) Except as provided in paragraph (d)(2) of this section, if you have a new facility that emits 100 tpy or more of HAP from the combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC manufacturing, mixing, and BMC manufacturing, you must reduce the total organic HAP emissions from these operations by at least 95 percent by weight and meet any applicable work practice standards in Table 4 to this subpart that apply to you. As an alternative to meeting 95 percent by weight, you may meet the organic HAP emissions limits in Table 5 to this subpart. If you have a continuous lamination/casting operation, that operation may alternatively meet a organic HAP emissions limit of 1.47 lbs/ton of neat resin plus and neat gel coat plus applied.

(2)(i) If your new facility manufactures large reinforced plastic composites parts using open molding or pultrusion operations, the specific open molding and pultrusion operations used to produce large parts are not required to reduce HAP emissions by 95 weight percent, but must meet the emission limits in Table 3 to this subpart.

(ii) A large open molding part is defined as a part that, when the final finished part is enclosed in the smallest rectangular six-sided box into which the part can fit, the total interior volume of the box exceeds 250 cubic feet, or any interior sides of the box exceed 50 square feet.

(iii) A large pultruded part is a part that exceeds an outside perimeter of 24 inches or has more than 350 reinforcements.

(e) If you have a new or existing facility subject to paragraphs (a) or (c) of this section at their initial compliance date, that subsequently meets or exceeds the 100 tpy threshold in any calendar year, you must notify your permitting authority in your compliance report. You may at the same time request a one-time exemption from the requirements of paragraphs (b) or (d) of this section in your compliance report if you can demonstrate all of the following:

(1) The exceedance of the threshold was due to circumstances that will not to be repeated.

(2) The average annual organic HAP emissions from the potentially affected operations for the last 3 years were below 100 tpy.

(3) Projected organic HAP emissions for the next calendar year are below 100 tpy, based on projected resin and gel coat use and the HAP emission factors calculated according to the procedures in § 63.5799

(f) If you apply for an exemption in paragraph (e) of this section, and subsequently exceed the HAP emission thresholds specified in paragraphs (a) or (c) of this section over the next 12-month period, you must notify the permitting authority in your semi-annual report, the exemption is removed, and your facility must comply with paragraphs (b) or (d) of this section within 3 years from the time your organic HAP emissions first exceeded the threshold.

(g) If you have repair operations subject to this subpart as defined in § 63.5785, these repair operations must meet the requirements in Tables 3 and 4 to this subpart, and are not required to meet the 95 percent organic HAP emissions reduction requirements in paragraphs (b) or (d) of this section.

(h) If you use an add-on control device to comply with this subpart, you must meet all requirements contained in 40 CFR part 63, subpart SS.

Options for Meeting Standards

§ 63.5810 What are my options for meeting the standards for open molding and centrifugal casting operations at new and existing sources?

You must use one of the following methods in paragraphs (a) through (d) of this section to meet the standards in § 63.5805. When you are complying with an emission limit in Tables 3 or 5 to this subpart, you may use any control method that reduces organic HAP emissions, including reducing resin and gel coat organic HAP content, changing to nonatomized mechanical application, covered curing techniques, and routing part or all of your emissions to an add-on control. The necessary calculations must be completed within 30 days after the end of each month. You may switch between the compliance options in paragraphs (a) through (d) of this section. When you change to an option based on a 12-month rolling average, you must base the average on the previous 12 months of data calculated using the compliance option you are currently using unless you were using the compliant materials option in paragraph (d) of this section. In this case, you must immediately begin collecting resin and gel coat use data and demonstrate compliance 12 months after changing options.

(a) *Meet the individual organic HAP emissions limits for each operation.* Demonstrate that you meet the individual organic HAP emissions limits for each open molding operation and for each centrifugal casting operation type in Tables 3, or 5 to this subpart that apply to you. This is done in two steps. First, determine an organic HAP factor for each individual resin and gel coat, application method, and control method you use in a particular operation. Second, calculate, for each particular operation type, a weighted average of those organic HAP emissions factors based on resin and gel coat use. Your calculated organic HAP emissions factor must either be at or below the applicable organic HAP emissions limit in Tables 3 or 5 to this subpart based on a 12-month rolling average. Use the procedures described in paragraphs (a)(1) through (3) of this section to calculate average organic HAP emissions factors for each of your operations.

(1) Calculate your actual organic HAP emissions factor for each different process stream within each operation type. A process stream is defined as each individual combination of resin or gel coat, application technique, and control technique. Process streams within operations types are considered different from each other if any of the following three characteristics vary: The neat resin plus or neat gel coat plus organic HAP content, the application technique, or the control technique. You must calculate organic HAP emissions factors for each different process stream by using the appropriate equations in Table 1 to this subpart for open molding and for centrifugal casting, or site-specific organic HAP emissions factors discussed in § 63.5796. If you want to use vapor suppressants to meet the organic HAP emissions limit for open molding, you must determine the vapor suppressant effectiveness by conducting testing according to the procedures specified of appendix A to subpart WWWW of 40 CFR part 63. If you want to use an add-on control device to meet the organic HAP emissions limit, you must determine the add-on control factor by conducting capture and control efficiency testing, using the procedures specified in § 63.5850. The organic HAP emissions factor calculated from the equations in Table 1 to this subpart, or site-specific emissions factors, is multiplied by the add-on control factor to calculate the organic HAP emissions factor after control. Use Equation 1 of this section to calculate the add-on control factor used in the organic HAP emissions factor equations.

$$\text{Add-on Control Factor} = 1 - \frac{\text{\% Control Efficiency}}{100} \qquad \text{(Eq. 1)}$$

Where:

Percent Control Efficiency=a value calculated from organic HAP emissions test measurements made according to the requirements of § 63.5850 to this subpart

(2) Calculate your actual operation organic HAP emissions factor for the last 12 months for each open molding operation type and for each centrifugal casting operation type by calculating the weighted average of the individual process stream organic HAP emissions factors within each respective operation. To do this, sum the product of each individual organic HAP emissions factor calculated in paragraph (a)(1) of this section and the amount of neat resin plus and neat gel coat plus usage that correspond to the individual factors and divide the numerator by the total amount of neat resin plus and neat gel coat plus used in that operation type. Use Equation 2 of this section to calculate your actual organic HAP emissions factor for each open molding operation type and each centrifugal casting operation type.

$$\begin{array}{c}\text{Actual Operation}\\ \text{Organic HAP}\\ \text{Emissions Factor}\end{array} = \frac{\sum_{i=1}^{n}\left(\text{Actual Process Stream EF}_i * \text{Material}_i\right)}{\sum_{i=1}^{n}\text{Material}_i} \qquad \text{(Eq. 2)}$$

Where:

Actual Process Stream EF_i=actual organic HAP emissions factor for process stream i, lbs/ton

Material_i=neat resin plus or neat gel coat plus used during the last 12 calendar months for process stream i, tons

n=number of process streams where you calculated an organic HAP emissions factor

(3) Compare each organic HAP emissions factor calculated in paragraph (b)(2) of this section with its corresponding organic HAP emissions limit in Tables 3 or 5 to this subpart. If all emissions factors are equal to or less than their corresponding emission limits, then you are in compliance.

(b) *HAP Emissions factor averaging option.* Demonstrate each month that you meet each weighted average of the organic HAP emissions limits in Tables 3 or 5 to this subpart that apply to you. When using this option, you must demonstrate compliance with the weighted average organic HAP emissions limit for all your open molding operations, and then separately demonstrate compliance with the weighted average organic HAP emissions limit for all your centrifugal casting operations. Open molding operations and centrifugal casting operations may not be averaged with each other.

(1) Each month calculate the weighted average organic HAP emissions limit for all open molding operations and the weighted average organic HAP emissions limit for all centrifugal casting operations for your facility for the last 12-month period to determine the organic HAP emissions limit you must meet. To do this, multiply the individual organic HAP emissions limits in Tables 3 or 5 to this subpart for each open molding (centrifugal casting) operation type by the amount of neat resin plus or neat gel coat plus used in the last 12 months for each open molding (centrifugal casting) operation type, sum these results, and then divide this sum by the total amount of neat resin plus and neat gel coat plus used in open molding (centrifugal casting) over the last 12 months. Use Equation 3 of this section to calculate the weighted average organic HAP emissions limit for all open molding operations and separately for all centrifugal casting operations.

$$\text{Weighted Average Emission Limit} = \frac{\sum_{i=1}^{n}\left(EL_i * \text{Material}_i\right)}{\sum_{i=1}^{n}\text{Material}_i} \qquad \text{(Eq. 3)}$$

Where:

EL_i=organic HAP emissions limit for operation type i, lbs/ton from Tables 3, 5 or 7 to this subpart

Material_i=neat resin plus or neat gel coat plus used during the last 12-month period for operation type i, tons

n=number of operations

(2) Each month calculate your actual weighted average organic HAP emissions factor for open molding and centrifugal casting. To do this, multiply your actual open molding (centrifugal casting) operation organic HAP emissions factors and the amount of neat resin plus and neat gel coat plus used in each open molding (centrifugal casting) operation type, sum the results, and divide this sum by the total amount of neat resin plus and neat gel coat plus used in open molding (centrifugal casting) operations. You must calculate your actual individual HAP emissions factors for each operation type as described in paragraphs (a)(1) and (2) of this section. Use Equation 4 of this section to calculate your actual weighted average organic HAP emissions factor.

$$\begin{array}{c}\text{Actual Weighted}\\ \text{Average Organic HAP}\\ \text{Emissions Factor}\end{array} = \frac{\sum_{i=1}^{n}\left(\text{Actual Operation } EF_i * \text{Material}_i\right)}{\sum_{i=1}^{n}\text{Material}_i} \qquad \text{(Eq. 4)}$$

Where:

Actual Individual EF_i=Actual organic HAP emissions factor for operation type i, lbs/ton

Material_i=neat resin plus or neat gel coat plus used during the last 12 calendar months for operation type i, tons

n=number of operations

(3) Compare the values calculated in paragraphs (b)(1) and (2) of this section. If each 12-month rolling average organic HAP emissions factor is less than or equal to the corresponding 12-month rolling average organic HAP emissions limit, then you are in compliance.

(c) *If you have multiple operation types, meet the organic HAP emissions limit for one operation type, and use the same resin(s) for all operations of that resin type.* If you have more than one operation type, you may meet the emission limit for one of those operations, and use the same resin(s) in all other open molding and centrifugal casting operations.

(1) This option is limited to resins of the same type. The resin types for which this option may be used are noncorrosion-resistant, corrosion-resistant and/or high strength, and tooling.

(2) For any combination of manual resin application, mechanical resin application, filament application, or centrifugal casting, you may elect to meet the organic HAP emissions limit for any one of these operations and use that operation's same resin in all of the resin operations listed in this paragraph. Table 7 to this subpart presents the possible combinations based on a facility selecting the application process that results in the highest allowable organic HAP content resin. If your resin organic HAP content is below the applicable values shown in Table 7 to this subpart, you are in compliance.

(3) You may also use a weighted average organic HAP content for each operation described in paragraph (c)(2) of this section. Calculate the weighted average organic HAP content monthly. Use Equation 2 in § 63.5810(a)(2) except substitute organic HAP content for organic HAP emissions factor. You are in compliance if the weighted average organic HAP content based on the last 12 months of resin use is less than or equal to the applicable organic HAP contents in Table 7 to this subpart.

(4) You may simultaneously use the averaging provisions in paragraph (b) of this section to demonstrate compliance for any operations and/or resins you do not include in your compliance demonstrations is paragraphs (c)(2) and (3) of this section. However, any resins for which you claim compliance under the option in paragraphs (c)(2) and (3) of this section may not be included in any of the averaging calculations described in paragraphs (a) or (b) of this section used for resins for which you are not claiming compliance under this option.

(d) Use resins and gel coats that do not exceed the maximum organic HAP contents shown in Table 3 to this subpart.

§ 63.5820 What are my options for meeting the standards for continuous lamination/casting operations?

You must use one or more of the options in paragraphs (a) through (d) of this section to meet the standards in § 63.5805. Use the calculation procedures in §§ 63.5865 through 63.5890.

(a) *Compliant line option.* Demonstrate that each continuous lamination line and each continuous casting line complies with the applicable standard.

(b) *Averaging option.* Demonstrate that all continuous lamination and continuous casting lines combined, comply with the applicable standard.

(c) *Add-on control device option.* If your operation must meet the 58.5 weight percent organic HAP emissions reduction limit in Table 3 to this subpart, you have the option of demonstrating that you achieve 95 percent reduction of all wet-out area organic HAP emissions.

(d) *Combination option.* Use any combination of options in paragraphs (a) and (b) of this section or, for affected sources at existing facilities, any combination of options in paragraphs (a), (b), and (c) of this section (in which one or more lines meet the standards on their own, two or more lines averaged together meet the standards, and one or more lines have their wet-out areas controlled to a level of 95 percent).

§ 63.5830 What are my options for meeting the standards for pultrusion operations subject to the 60 weight percent organic HAP emissions reductions requirement?

You must use one or more of the options in paragraphs (a) through (e) of this section to meet the 60 weight percent organic HAP emissions limit in Table 3 to this subpart, as required in § 63.5805.

(a) Achieve an overall reduction in organic HAP emissions of 60 weight percent by capturing the organic HAP emissions and venting them to a control device or any combination of control devices. Conduct capture and destruction efficiency testing as specified in 63.5850 to this subpart to determine the percent organic HAP emissions reduction.

(b) Design, install, and operate wet area enclosures and resin drip collection systems on pultrusion machines that meet the criteria in paragraphs (b)(1) through (10) of this section.

(1) The enclosure must cover and enclose the open resin bath and the forming area in which reinforcements are pre-wet or wet-out and moving toward the die(s). The surfaces of the enclosure must be closed except for openings to allow material to enter and exit the enclosure.

(2) For open bath pultrusion machines with a radio frequency pre-heat unit, the enclosure must extend from the beginning of the resin bath to within 12.5 inches or less of the entrance of the radio frequency pre-heat unit. If the stock that is within 12.5 inches or less of the entrance to the radio frequency pre-heat unit has any drip, it must be enclosed. The stock exiting the radio frequency pre-heat unit is not required to be in an enclosure if the stock has no drip between the exit of the radio frequency pre-heat unit to within 0.5 inches of the entrance of the die.

(3) For open bath pultrusion machines without a radio frequency pre-heat unit, the enclosure must extend from the beginning of the resin bath to within 0.5 inches or less of the die entrance.

(4) For pultrusion lines with a pre-wet area prior to direct die injection, the enclosure must extend from the point at which the resin is applied to the reinforcement to within 12.5 inches or less of the entrance of the die(s). If the stock that is within 12.5 inches or less of the entrance to the die has any drip, it must be enclosed.

(5) The total open area of the enclosure must not exceed two times the cross sectional area of the puller window(s) and must comply with the requirements in paragraphs (b)(5)(i) through (iii) of this section.

(i) All areas that are open need to be included in the total open area calculation with the exception of access panels, doors, and/or hatches that are part of the enclosure.

(ii) The area that is displaced by entering reinforcement or exiting product is considered open.

(iii) Areas that are covered by brush covers are considered closed.

(6) Open areas for level control devices, monitoring devices, agitation shafts, and fill hoses must have no more than 1.0 inch clearance.

(7) The access panels, doors, and/or hatches that are part of the enclosure must close tightly. Damaged access panels, doors, and/or hatches that do not close tightly must be replaced.

(8) The enclosure may not be removed from the pultrusion line, and access panels, doors, and/or hatches that are part of the enclosure must remain closed whenever resin is in the bath, except for the time period discussed in paragraph (b)(9) of this section.

(9) The maximum length of time the enclosure may be removed from the pultrusion line or the access panels, doors, and/or hatches and may be open, is 30 minutes per 8 hour shift, 45 minutes per 12 hour shift, or 90 minutes per day if the machine is operated for 24 hours in a day. The time restrictions do not apply if the open doors or panels do not cause the limit of two times the puller window area to be exceeded. Facilities may average the times that access panels, doors, and/or hatches are open across all operating lines. In that case the average must not exceed the times shown in this paragraph (b)(9). All lines included in the average must have operated the entire time period being averaged.

(10) No fans, blowers, and/or air lines may be allowed within the enclosure. The enclosure must not be ventilated.

(c) Use direct die injection pultrusion machines with resin drip collection systems that meet all the criteria specified in paragraphs (c)(1) through (3) of this section.

(1) All the resin that is applied to the reinforcement is delivered directly to the die.

(2) No exposed resin is present, except at the face of the die.

(3) Resin drip is captured in closed piping and recycled directly to the resin injection chamber.

(d) Use a preform injection system that meets the definition in § 63.5935

(e) Use any combination of options in paragraphs (a) through (d) of this section in which different pultrusion lines comply with different options described in paragraphs (a) through (d) of this section, and

(1) Each individual pultrusion machine meets the 60 percent reduction requirement, or

(2) The weighted average reduction based on resin throughout of all machines combined is 60 percent. For purposes of the average percent reduction calculation, wet area enclosures reduce organic HAP emissions by 60 percent, and direct die injection and preform injection reduce organic HAP emissions by 90 percent.

General Compliance Requirements

§ 63.5835 What are my general requirements for complying with this subpart?

(a) You must be in compliance at all times with the work practice standards in Table 4 to this subpart, as well as the organic HAP emissions limits in Tables 3, or 5, or the organic HAP content limits in Table 7 to this subpart, as applicable, that you are meeting without the use of add-on controls.

(b) You must be in compliance with all organic HAP emissions limits in this subpart that you meet using add-on controls, except during periods of startup, shutdown, and malfunction.

(c) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in § 63.6(e)(1)(i).

(d) You must develop and implement a written startup, shutdown, and malfunction plan according to the provisions in § 63.6(e)(3) for any organic

HAP emissions limits you meet using an add-on control.

Testing and Initial Compliance Requirements

§ 63.5840 By what date must I conduct a performance test or other initial compliance demonstration?

You must conduct performance tests, performance evaluations, design evaluations, capture efficiency testing, and other initial compliance demonstrations by the compliance date specified in Table 2 to this subpart, with three exceptions. Open molding and centrifugal casting operations that elect to meet a organic HAP emissions limit on a 12-month rolling average must initiate collection of the required data on the compliance date, and demonstrate compliance 1 year after the compliance date. New sources that use add-on controls to initially meet compliance must demonstrate compliance within 180 days after their compliance date.

§ 63.5845 When must I conduct subsequentperformance tests?

You must conduct a performance test every 5 years following the initial performance test for any standard you meet with an add-on control device.

§ 63.5850 How do I conduct performance tests, performance evaluations, and design evaluations?

(a) If you are using any add-on controls to meet a organic HAP emissions limit in this subpart, you must conduct each performance test, performance evaluation, and design evaluation in 40 CFR part 63, subpart SS, that applies to you. The basic requirements for performance tests, performance evaluations, and design evaluations are presented in Table 6 to this subpart.

(b) Each performance test must be conducted according to the requirements in § 63.7(e)(1) and under the specific conditions that 40 CFR part 63, subpart SS, specifies.

(c) Each performance evaluation must be conducted according to the requirements in § 63.8(e) as applicable and under the specific conditions that 40 CFR part 63, subpart SS, specifies.

(d) You may not conduct performance tests or performance evaluations during periods of startup, shutdown, or malfunction, as specified in § 63.7(e)(1).

(e) You must conduct the control device performance test using the emission measurement methods specified in paragraphs (e)(1) through (5) 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.

(5) Use the procedures in EPA Method 3B of appendix A to 40 CFR part 60 to determine an oxygen correction factor if required by § 63.997(e)(2)(iii)(C). You may use American Society of Mechanical Engineers (ASME) PTC 19–10–1981–Part 10 (available for purchase from ASME, P.O. Box 2900, 22 Law Drive, Fairfield, New Jersey, 07007–2900, or online at *www.asme.org/catalog*) as an alternative to EPA Method 3B of appendix A to 40 CFR part 60.

(f) 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.

(g) If you are using a concentrator/oxidizer control device, you must test the combined flow upstream of the concentrator, and the combined outlet flow from both the oxidizer and the concentrator to determine the overall control device efficiency. If the outlet flow from the concentrator and oxidizer are exhausted in separate stacks, you must test both stacks simultaneously with the inlet to the concentrator to determine the overall control device efficiency.

(h) 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.

§ 63.5855 What are my monitor installation and operation requirements?

You must monitor and operate all add-on control devices according to the procedures in 40 CFR part 63, subpart SS.

§ 63.5860 How do I demonstrate initial compliance with the standards?

(a) You demonstrate initial compliance with each organic HAP emissions standard in paragraphs (a) through (h) of § 63.5805 that applies to you by using the procedures shown in Tables 8 and 9 to this subpart.

(b) If using an add-on control device to demonstrate compliance, you must also establish each control device operating limit in 40 CFR part 63, subpart SS, that applies to you.

Emission Factor, Percent Reduction, and Capture Efficiency Calculation Procedures for Continuous Lamination/Casting Operations

§ 63.5865 What data must I generate to demonstrate compliance with the standards for continuous lamination/casting operations?

(a) For continuous lamination/casting affected sources complying with a percent reduction requirement, you must generate the data identified in

Tables 10 and 11 to this subpart for each data requirement that applies to your facility.

(b) For continuous lamination/casting affected sources complying with a lbs/ton limit, you must generate the data identified in Tables 11 and 12 to this subpart for each data requirement that applies to your facility.

§ 63.5870 How do I calculate annual uncontrolled and controlled organic HAP emissions from my wet-out area(s) and from my oven(s) for continuous lamination/casting operations?

To calculate your annual uncontrolled and controlled organic HAP emissions from your wet-out areas and from your ovens, you must develop uncontrolled and controlled wet-out area and uncontrolled and controlled oven organic HAP emissions estimation equations or factors to apply to each formula applied on each line, determine how much of each formula for each end product is applied each year on each line, and assign uncontrolled and controlled wet-out area and uncontrolled and controlled oven organic HAP emissions estimation equations or factors to each formula. You must determine the overall capture efficiency using the procedures in § 63.5850 to this subpart.

(a) To develop uncontrolled and controlled organic HAP emissions estimation equations and factors, you must, at a minimum, do the following, as specified in paragraphs (a)(1) through (6) of this section:

(1) Identify each end product and the thickness of each end product produced on the line. Separate end products into the following end product groupings, as applicable: corrosion-resistant gel coated end products, noncorrosion-resistant gel coated end products, corrosion-resistant nongel coated end products, and noncorrosion-resistant nongel coated end products. This step creates end product/thickness combinations.

(2) Identify each formula used on the line to produce each end product/thickness combination. Identify the amount of each such formula applied per year. Rank each formula used to produce each end product/thickness combination according to usage within each end product/thickness combination.

(3) For each end product/thickness combination being produced, select the formula with the highest usage rate for testing.

(4) If not already selected, also select the worst-case formula (likely to be associated with the formula with the highest organic HAP content, type of HAP, application of gel coat, thin product, low line speed, higher resin table temperature) amongst all formulae. (You may use the results of the worst-case formula test for all formulae if desired to limit the amount of testing required.)

(5) For each formula selected for testing, conduct at least one test (consisting of three runs). During the test, track information on organic HAP content and type of HAP, end product thickness, line speed, and resin temperature on the wet-out area table.

(6) Using the test results, develop uncontrolled and controlled organic HAP emissions estimation equations (or factors) or series of equations (or factors) that best fit the results for estimating uncontrolled and controlled organic HAP emissions, taking into account the organic HAP content and type of HAP, end product thickness, line speed, and resin temperature on the wet-out area table.

(b) In lieu of using the method specified in paragraph (a) of this section for developing uncontrolled and controlled organic HAP emissions estimation equations and factors, you may either method specified in paragraphs (b)(1) and (2) of this section, as applicable.

(1) For either uncontrolled or controlled organic HAP emissions estimates, you may use previously established, facility-specific organic HAP emissions equations or factors, provided they allow estimation of both wet-out area and oven organic HAP emissions, where necessary, and have been approved by your permitting authority. If a previously established equation or factor is specific to the wet-out area only, or to the oven only, then you must develop the corresponding uncontrolled or controlled equation or factor for the other organic HAP emissions source.

(2) For uncontrolled (controlled) organic HAP emissions estimates, you may use controlled (uncontrolled) organic HAP emissions estimates and control device destruction efficiency to calculate your uncontrolled (controlled) organic HAP emissions provided the control device destruction efficiency was calculated at the same time you collected the data to develop your facility's controlled (uncontrolled) organic HAP emissions estimation equations and factors.

(c) Assign to each formula an uncontrolled organic HAP emissions estimation equation or factor based on the end product/thickness combination for which that formula is used.

(d)(1) To calculate your annual uncontrolled organic HAP emissions from wet-out areas that do not have any capture and control and from wet-out areas that are captured by an enclosure but are vented to the atmosphere and not to a control device, multiply each formula's annual usage by its appropriate organic HAP emissions estimation equation or factor and sum the individual results.

(2) To calculate your annual uncontrolled organic HAP emissions that escape from the enclosure on the wet-out area, multiply each formula's annual usage by its appropriate uncontrolled organic HAP emissions estimation equation or factor, sum the individual results, and multiply the summation by 1 minus the percent capture (expressed as a fraction).

(3) To calculate your annual uncontrolled oven organic HAP emissions, multiply each formula's annual usage by its appropriate uncontrolled organic HAP emissions estimation equation or factor and sum the individual results.

(4) To calculate your annual controlled organic HAP emissions, multiply each formula's annual usage by its appropriate organic HAP emissions estimation equation or factor and sum the individual results to obtain total annual controlled organic HAP emissions.

(e) Where a facility is calculating both uncontrolled and controlled organic HAP emissions estimation equations and factors, you must test the same formulae. In addition, you must develop both sets of equations and factors from the same tests.

§ 63.5875 How do I determine the capture efficiency of the enclosure on my wet-out area and the capture efficiency of my oven(s) for continuous lamination/casting operations?

(a) The capture efficiency of a wet-out area enclosure is assumed to be 100 percent if it meets the design and operation requirements for a permanent total enclosure (PTE) specified in EPA Method 204 of appendix M to 40 CFR part 51. If a PTE does not exist, then a temporary total enclosure must be constructed and verified using EPA Method 204, and capture efficiency testing must be determined using EPA Methods 204B through E of appendix M to 40 CFR part 51.

(b) The capture efficiency of an oven is to be considered 100 percent, provided the oven is operated under negative pressure.

§ 63.5880 How do I determine how much neat resin plus is applied to the line and how much neat gel coat plus is applied to the line for continuous lamination/casting operations?

Use the following procedures to determine how much neat resin plus and neat gel coat plus is applied to the line each year.

(a) Track formula usage by end product/thickness combinations.

(b) Use in-house records to show usage. This may be either from automated systems or manual records.

(c) Record daily the usage of each formula/end product combination on each line. This is to be recorded at the end of each run (*i.e.*, when a changeover in formula or product is made) and at the end of each shift.

(d) Sum the amounts from the daily records to calculate annual usage of each formula/end product combination by line.

§ 63.5885 How do I calculate percent reduction to demonstrate compliance for Continuous Lamination/Casting Operations?

You may calculate percent reduction using any of the methods in paragraphs (a) through (d) of this section.

(a) *Compliant line option.* If all of your wet-out areas have PTE that meet the requirements of EPA Method 204 of appendix M of 40 CFR part 51, and all of your wet-out area organic HAP emissions and oven organic HAP emissions are vented to an add-on control device, use Equation 1 of this section to demonstrate compliance. In all other situations, use Equation 2 of this section to demonstrate compliance.

$$PR = \frac{(\text{Inlet}) - (\text{Outlet})}{(\text{Inlet})} \times 100 \qquad \text{(Eq. 1)}$$

Where:

PR=percent reduction

Inlet=HAP emissions entering the control device, lbs per year

Outlet=HAP emissions exiting the control device to the atmosphere, lbs per year

$$PR = \frac{(WAE_u + O_u) - (WAE_c + O_c)}{(WAE_u + O_u)} \times 100 \qquad \text{(Eq. 2)}$$

Where:

PR=percent reduction

WAE_u=uncontrolled wet-out area organic HAP emissions, lbs per year

O_u=uncontrolled oven organic HAP emissions, lbs per year

WAE_c=controlled wet-out area organic HAP emissions, lbs per year

O_c=controlled oven organic HAP emissions, lbs per year

(b) *Averaging option.* Use Equation 3 of this section to calculate percent reduction.

$$PR = \frac{\left(\sum_{i=1}^{m} WAE_{ui} + \sum_{j=1}^{n} O_{uj}\right) - \left(\sum_{i=1}^{o} WAE_{ci} + \sum_{j=1}^{p} O_{cj}\right)}{\left(\sum_{i=1}^{m} WAE_{ui} + \sum_{j=1}^{n} O_{uj}\right)} \times 100 \qquad \text{(Eq. 3)}$$

Where:

PR=percent reduction

WAE_{ui}=uncontrolled organic HAP emissions from wet-out area i, lbs per year

O_{uj}=uncontrolled organic HAP emissions from oven j, lbs per year

WAE_{ci}=controlled organic HAP emissions from wet-out area i, lbs per year

O_{cj}=controlled organic HAP emissions from oven j, lbs per year

i=number of wet-out areas

j=number of ovens

m=number of wet-out areas uncontrolled

n=number of ovens uncontrolled

o=number of wet-out areas controlled

p=number of ovens controlled

(c) *Add-on control device option.* Use Equation 1 of this section to calculate percent reduction.

(d) *Combination option.* Use Equations 1 through 3 of this section, as applicable, to calculate percent reduction.

§ 63.5890 How do I calculate a organic HAP emissions factor to demonstrate compliance for continuous lamination/casting operations?

(a) *Compliant line option.* Use Equation 1 of this section to calculate a organic HAP emissions factor in lbs/ton.

$$E = \frac{WAE_u + WAE_c + O_u + O_c}{(R + G)} \qquad \text{(Eq. 1)}$$

Where:

E=HAP emissions factor in lbs/ton of resin and gel coat

WAE_u=uncontrolled wet-out area organic HAP emissions, lbs per year

WAE_c=controlled wet-out area organic HAP emissions, lbs per year

O_u=uncontrolled oven organic HAP emissions, lbs per year

O_c=controlled oven organic HAP emissions, lbs per year

R=total usage of neat resin plus, tpy

G=total usage of neat gel coat plus, tpy

(b) *Averaging option.* Use Equation 2 of this section to demonstrate compliance.

$$E = \frac{\sum_{i=1}^{m} WAE_{ui} + \sum_{i=1}^{o} WAE_{ci} + \sum_{j=1}^{n} O_{uj} + \sum_{j=1}^{p} O_{cj}}{(R+G)} \qquad \text{(Eq. 2)}$$

Where:

E=HAP emissions factor in lbs/ton of resin and gel coat
WAE_{ui}=uncontrolled organic HAP emissions from wet-out area i, lbs per year
WAE_{ci}=controlled organic HAP emissions from wet-out area i, lbs per year
O_{uj}=uncontrolled organic HAP emissions from oven j, lbs per year
O_{cj}=controlled organic HAP emissions from oven j, lbs per year
i=number of wet-out areas
j=number of ovens
m=number of wet-out areas uncontrolled
n=number of ovens uncontrolled
o=number of wet-out areas controlled
p=number of ovens controlled
R=total usage of neat resin plus, tpy
G=total usage of neat gel coat plus, tpy

(c) *Combination option.* Use Equations 1 and 2 of this section, as applicable, to demonstrate compliance.

Continuous Compliance Requirements

§ 63.5895 How do I monitor and collect data to demonstrate continuous compliance?

(a) During production, you must collect and keep a record of data as indicated in 40 CFR part 63, subpart SS, if you are using an add-on control device.

(b) You must monitor and collect data as specified in paragraphs (b)(1) through (4) of this section.

(1) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times that the affected source is operating.

(2) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities for purposes to this subpart, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

(3) At all times, you must maintain necessary parts for routine repairs of the monitoring equipment.

(4) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring equipment to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You must collect and keep records of resin and gel coat use, organic HAP content, and operation where the resin is used if you are meeting any organic HAP emissions limits based on an organic HAP emissions limit in Tables 3 or 5 to this subpart. You must collect and keep records of resin and gel coat use, organic HAP content, and operation where the resin is used if you are meeting any organic HAP content limits in Table 7 to this subpart if you are averaging organic HAP contents. Resin use records may be based on purchase records if you can reasonably estimate how the resin is applied. The organic HAP content records may be based on MSDS or on resin specifications supplied by the resin supplier.

(d) If you initially demonstrate that all resins and gel coats individually meet the applicable organic HAP emissions limits, or organic HAP content limits, then resin and gel coat use records are not required. However, you must include a statement in each compliance report that all resins and gel coats still meet the organic HAP limits for compliant resins and gel coats shown in Tables 3 or 7 to this subpart. If after this initial demonstration, you change to a higher organic HAP resin or gel coat, or increase the resin or gel coat organic HAP content, or change to a higher-emitting resin or gel coat application method, then you must either again demonstrate that all resins and gel coats still meet the applicable organic HAP emissions limits, or begin collecting resin and gel coat use records and calculate compliance on a 12-month rolling average.

(e) For each of your pultrusion machines, you must record all times that wet area enclosures doors or covers are open and there is resin present in the resin bath.

§ 63.5900 How do I demonstrate continuous compliance with the standards?

(a) You must demonstrate continuous compliance with each standard in § 63.5805 that applies to you according to the methods specified in paragraphs (a)(1) through (3) of this section.

(1) Compliance with organic HAP emissions limits for sources using add-on control devices is demonstrated following the procedures in 40 CFR part 63, subpart SS. Sources using add-on controls may also use continuous emissions monitors to demonstrate continuous compliance as an alternative to control parameter monitoring.

(2) Compliance with organic HAP emissions limits is demonstrated by maintaining a organic HAP emissions factor value less than or equal to the appropriate organic HAP emissions limit listed in Tables 3, or 5 to this subpart, on a 12-month rolling average, or by including in each compliance report a statement that all resins and gel coats meet the appropriate organic HAP emissions limits, as discussed in § 63.5895(d).

(3) Compliance with organic HAP content limits in Table 7 to this subpart is demonstrated by maintaining an average organic HAP content value less than or equal to the appropriate organic HAP contents listed in Table 7 to this subpart, on a 12-month rolling average, or by including in each compliance report a statement that all resins and gel coats individually meet the appropriate organic HAP content limits, as discussed in § 63.5895(d).

(4) Compliance with the work practice standards in Table 4 to this subpart is demonstrated by performing the work practice required for your operation.

(b) You must report each deviation from each standard in § 63.5805 that applies to you. The deviations must be reported according to the requirements in § 63.5910.

(c) Except as provided in paragraph (d) of this section, during periods of startup, shutdown or malfunction, you must meet the organic HAP emissions limits and work practice standards that apply to you.

(d) When you use an add-on control device to meet standards in § 63.5805, you are not required to meet those standards during periods of startup, shutdown, or malfunction, but you must operate your affected source in accordance with the startup, shutdown, and malfunction plan.

(e) Consistent with §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of malfunction for those affected sources and standards specified in paragraph (d) of this section are not violations if you demonstrate to the

Administrator's satisfaction that you were operating in accordance with the startup, shutdown, and malfunction plan. The Administrator will determine whether deviations that occur during a period of startup, shutdown, and malfunction are violations, according to the provisions in § 63.6(e).

Notifications, Reports, and Records

§ 63.5905 What notifications must I submit and when?

(a) You must submit all of the notifications in Table 13 to this subpart that apply to you by the dates specified in Table 13 to this subpart. The notifications are described more fully in 40 CFR part 63, subpart A, referenced in Table 13 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.

§ 63.5910 What reports must I submit and when?

(a) You must submit each report in Table 14 to this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report by the date specified in Table 14 to this subpart and according to paragraphs (b)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.5800 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 § 63.5800.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in § 63.5800.

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

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

(5) For each affected source that is subject to permitting requirements pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to § 70.6 (a)(3)(iii)(A) or § 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 contain the information in paragraphs (c)(1) through (6) of this section:

(1) Company name and address.

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

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

(4) If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in § 63.10(d)(5)(i).

(5) If there are no deviations from any organic HAP emissions limitations (emissions limit and operating limit) that apply to you, and there are no deviations from the requirements for work practice standards in Table 4 to this subpart, a statement that there were no deviations from the organic HAP emissions limitations or work practice standards during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including a continuous emissions monitoring system (CEMS) and an operating parameter monitoring system were out of control, as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out of control during the reporting period.

(d) For each deviation from a organic HAP emissions limitation (*i.e.,* emissions limit and operating limit) and for each deviation from the requirements for work practice standards that occurs at an affected source where you are not using a CMS to comply with the organic HAP emissions limitations or work practice standards in this subpart, the compliance report must contain the information in paragraphs (c)(1) through (4) of this section and in paragraphs (d)(1) and (2) of this section. This includes periods of startup, shutdown, and malfunction.

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

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from a organic HAP emissions limitation (*i.e.,* emissions limit and operating limit) occurring at an affected source where you are using a CMS to comply with the organic HAP emissions limitation in this subpart, you must include the information in paragraphs (c)(1) through (4) of this section and in paragraphs (e)(1) through (12) of this section. This includes periods of startup, shutdown, and malfunction.

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

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

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

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

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

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

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

(8) An identification of each organic HAP that was monitored at the affected source.

(9) A brief description of the process units.

(10) A brief description of the CMS.

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

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) You must report if you have exceeded the 100 tpy organic HAP emissions threshold if that exceedance would make your facility subject to § 63.5805(b) or (d). Include with this report any request for an exemption under § 63.5805(e). If you receive an exemption under § 63.5805(e) and subsequently exceed the 100 tpy organic HAP emissions threshold, you must report this exceedance as required in § 63.5805(f).

(g) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by § 70.6(a)(3)(iii)(A) or § 71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to Table 14 to this subpart along with, or as part of, the semiannual monitoring report required by § 70.6(a)(3)(iii)(A) or § 71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any organic HAP emissions limitation (including any operating limit) or work practice requirement in this subpart, submission of the compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.

(h) Submit compliance reports and startup, shutdown, and malfunction reports based on the requirements in Table 14 to this subpart, and not based on the requirements in § 63.999.

§ 63.5915 What records must I keep?

(a) You must keep the records listed in paragraphs (a)(1) through (3) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

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

(3) Records of performance tests, design, and performance evaluations as required in § 63.10(b)(2).

(b) If you use an add-on control device, you must keep all records required in 40 CFR part 63, subpart SS, to show continuous compliance with this subpart.

(c) You must keep all data, assumptions, and calculations used to determine organic HAP emissions factors or average organic HAP contents for operations listed in Tables 3, 5, and 7 to this subpart.

(d) You must keep a certified statement that you are in compliance with the work practice requirements in Table 4 to this subpart, as applicable.

(e) For a new or existing continuous lamination/casting operation, you must keep the records listed in paragraphs (e)(1) through (4) of this section, when complying with the percent reduction and/or lbs/ton requirements specified in paragraphs (a) through (d) of § 63.5805.

(1) You must keep all data, assumptions, and calculations used to determine percent reduction and/or lbs/ton as applicable;

(2) You must keep a brief description of the rationale for the assignment of an equation or factor to each formula;

(3) When using facility-specific organic HAP emissions estimation equations or factors, you must keep all data, assumptions, and calculations used to derive the organic HAP emissions estimation equations and factors and identification and rationale for the worst-case formula; and

(4) For all organic HAP emissions estimation equations and organic HAP emissions factors, you must keep documentation that the appropriate permitting authority has approved them.

§ 63.5920 In what form and how long must I keep my records?

(a) You must maintain all applicable records in such a manner that they can be readily accessed and are suitable for inspection according to § 63.10(b)(1).

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

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

(d) You may keep records in hard copy or computer readable form including, but not limited to, paper, microfilm, computer floppy disk, magnetic tape, or microfiche.

Other Requirements and Information

§ 63.5925 What parts of the General Provisions apply to me?

Table 15 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

§ 63.5930 Who implements and enforces this subpart?

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

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

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

(1) Approval of alternatives to the organic HAP emissions standards in § 63.5805 under § 63.6(g).

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

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

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

§ 63.5935 What definitions apply to this subpart?

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

Atomized mechanical application means application of resin or gel coat with spray equipment that separates the liquid into a fine mist. This fine mist may be created by forcing the liquid under high pressure through an elliptical orifice, bombarding a liquid stream with directed air jets, or a combination of these techniques.

Bulk molding compound (BMC) means a putty-like molding compound containing resin(s) in a form that is ready to mold. In addition to resins, BMC may contain catalysts, fillers, and reinforcements. Bulk molding compound can be used in compression molding and injection molding operations to manufacture reinforced plastic composites products.

BMC manufacturing means a process that involves the preparation of BMC.

Centrifugal casting means a process for fabricating cylindrical composites, such as pipes, in which composite materials are positioned inside a rotating hollow mandrel and held in place by centrifugal forces until the part is sufficiently cured to maintain its physical shape.

Charge means the amount of SMC or BMC that is placed into a compression or injection mold necessary to complete one mold cycle.

Cleaning means removal of composite materials, such as cured and uncured resin from equipment, finished surfaces, floors, hands of employees, or any other surfaces.

Clear production gel coat means an unpigmented, quick-setting resin used to improve the surface appearance and/

or performance of composites. It can be used to form the surface layer of any composites other than those used for molds in tooling operations.

Closed molding means a grouping of processes for fabricating composites in a way that HAP-containing materials are not exposed to the atmosphere except during the material loading stage (*e.g.*, compression molding, injection molding, and resin transfer molding). Processes where the mold is covered with plastic (or equivalent material) prior to resin application, and the resin is injected into the covered mold are also considered closed molding.

Composite means a shaped and cured part produced by using composite materials.

Composite materials means the raw materials used to make composites. The raw materials include styrene containing resins. They may also include gel coat, monomer, catalyst, pigment, filler, and reinforcement.

Compression molding means a closed molding process for fabricating composites in which composite materials are placed inside matched dies that are used to cure the materials under heat and pressure without exposure to the atmosphere. The addition of mold paste or in-mold coating is considered part of the closed molding process. The composite materials used in this process are generally SMC or BMC.

Compression/injection molding means a grouping of processes that involves the use of compression molding and/or injection molding.

Continuous casting means a continuous process for fabricating composites in which composite materials are placed on an in-line conveyor belt to produce cast sheets that are cured in an oven.

Continuous lamination means a continuous process for fabricating composites in which composite materials are typically sandwiched between plastic films, pulled through compaction rollers, and cured in an oven. This process is generally used to produce flat or corrugated products on an in-line conveyor.

Continuous lamination/casting means a grouping of processes that involves the use of continuous lamination and/or continuous casting.

Controlled emissions means those organic HAP emissions that are vented from a control device to the atmosphere.

Corrosion-resistant gel coat means a gel coat used on a product made with a corrosion-resistant resin that has a corrosion-resistant end-use application.

Corrosion-resistant end-use applications means applications where the product is manufactured specifically for an application that requires a level of chemical inertness or resistance to chemical attack above that required for typical reinforced plastic composites products. These applications include, but are not limited to, chemical processing and storage; pulp and paper production; sewer and wastewater treatment; power generation; potable water transfer and storage; food and drug processing; pollution or odor control; metals production and plating; semiconductor manufacturing; petroleum production, refining, and storage; mining; textile production; nuclear materials storage; swimming pools; and cosmetic production, as well as end-use applications that require high strength resins.

Corrosion-resistant industry standard includes the following standards: ASME RTP–1 or Sect. X; ASTM D5364, D3299, D4097, D2996, D2997, D3262, D3517, D3754, D3840, D4024, D4160, D4161, D4162, D4184, D3982, or D3839; ANSI/AWWA C950; UL 215, 1316 or 1746, IAPMO PS–199, or written customer requirements for resistance to specified chemical environments.

Corrosion-resistant product means a product made with a corrosion-resistant resin and is manufactured to a corrosion-resistant industry standard, or a food contact industry standard, or is manufactured for corrosion-resistant end-use applications involving continuous or temporary chemical exposures.

Corrosion-resistant resin means a resin that either:

(1) Displays substantial retention of mechanical properties when undergoing ASTM C–581 coupon testing, where the resin is exposed for 6 months or more to one of the following materials: Material with a pH $\geq$ 12.0 or $\leq$ 3.0, oxidizing or reducing agents, organic solvents, or fuels or additives as defined in 40 CFR 79.2. In the coupon testing, the exposed resin needs to demonstrate a minimum of 50 percent retention of the relevant mechanical property compared to the same resin in unexposed condition. In addition, the exposed resin needs to demonstrate an increased retention of the relevant mechanical property of at least 20 percentage points when compared to a similarly exposed general-purpose resin. For example, if the general-purpose resin retains 45 percent of the relevant property when tested as specified above, then a corrosion-resistant resin needs to retain at least 65 percent (45 percent plus 20 percent) of its property. The general-purpose resin used in the test needs to have an average molecular weight of greater than 1,000, be formulated with a 1:2 ratio of maleic anhydride to phthalic anhydride and 100 percent diethylene glycol, and a styrene content between 43 to 48 percent; or

(2) Complies with industry standards that require specific exposure testing to corrosive media, such as UL 1316, UL 1746, or ASTM F–1216.

Doctor box means the box or trough on an SMC machine into which the liquid resin paste is delivered before it is metered onto the carrier film.

Filament application means an open molding process for fabricating composites in which reinforcements are fed through a resin bath and wound onto a rotating mandrel. The materials on the mandrel may be rolled out or worked by using nonmechanical tools prior to curing. Resin application to the reinforcement on the mandrel by means other than the resin bath, such as spray guns, pressure-fed rollers, flow coaters, or brushes is not considered filament application.

Filled Resin means that fillers have been added to a resin such that the amount of inert substances is at least 10 percent by weight of the total resin plus filler mixture. Filler putty made from a resin is considered a filled resin.

Fillers means inert substances dispersed throughout a resin, such as calcium carbonate, alumina trihydrate, hydrous aluminum silicate, mica, feldspar, wollastonite, silica, and talc. Materials that are not considered to be fillers are glass fibers or any type of reinforcement and microspheres.

Fire retardant gel coat means a gel coat used for products for which low-flame spread/low-smoke resin is used.

Fluid impingement technology means a spray gun that produces an expanding non-misting curtain of liquid by the impingement of low-pressure uninterrupted liquid streams.

Food contact industry standard means a standard related to food contact application contained in Food and Drug Administration's regulations at 21 CFR 177.2420.

Gel Coat means a quick-setting resin used to improve surface appearance and/or performance of composites. It can be used to form the surface layer of any composites other than those used for molds in tooling operations.

Gel coat application means a process where either clear production, pigmented production, white/off-white or tooling gel coat is applied.

HAP-containing materials storage means an ancillary process which involves keeping HAP-containing materials, such as resins, gel coats, catalysts, monomers, and cleaners, in containers or bulk storage tanks for any length of time. Containers may include small tanks, totes, vessels, and buckets.

High Performance gel coat means a gel coat used on products for which National Science Foundation, United States Department of Agriculture, ASTM, durability, or other property testing is required.

High strength gel coat means a gel coat applied to a product that requires high strength resin.

High strength resins means polyester resins which have a casting tensile strength of 10,000 pounds per square inch or more and which are used for manufacturing products that have high strength requirements such as structural members and utility poles.

Injection molding means a closed molding process for fabricating composites in which composite materials are injected under pressure into a heated mold cavity that represents the exact shape of the product. The composite materials are cured in the heated mold cavity.

Low Flame Spread/Low Smoke Products means products that meet the following requirements. The products must meet both the applicable flame spread requirements and the applicable smoke requirements. Interior or exterior building application products must meet an ASTM E–84 Flame Spread Index of less than or equal to 25, and Smoke Developed Index of less than or equal to 450, or pass National Fire Protection Association 286 Room Corner Burn Test with no flash over and total smoke released not exceeding 1000 meters square. Mass transit application products must meet an ASTM E–162 Flame Spread Index of less than or equal to 35 and ASTM E662 Smoke Density Ds @ 1.5 minutes less than or equal to 100 and Ds @ 4 minutes less than to equal to 200. Duct application products must meet ASTM E084 Flame Spread Index less than or equal to 25 and Smoke Developed Index less than or equal to 50 on the interior and/or exterior of the duct.

Manual resin application means an open molding process for fabricating composites in which composite materials are applied to the mold by pouring or by using hands and nonmechanical tools, such as brushes and rollers. Materials are rolled out or worked by using nonmechanical tools prior to curing. The use of pressure-fed rollers and flow coaters to apply resin is not considered manual resin application.

Mechanical resin application means an open molding process for fabricating composites in which composite materials (except gel coat) are applied to the mold by using mechanical tools such as spray guns, pressure-fed rollers, and flow coaters. Materials are rolled out or worked by using nonmechanical tools prior to curing.

Mixing means the blending or agitation of any HAP-containing materials in vessels that are 5.00 gallons (18.9 liters) or larger. Mixing may involve the blending of resin, gel coat, filler, reinforcement, pigments, catalysts, monomers, and any other additives.

Mold means a cavity or matrix into or onto which the composite materials are placed and from which the product takes its form.

Neat gel coat means the resin as purchased for the supplier, but not including any inert fillers.

Neat gel coat plus means neat gel coat plus any organic HAP-containing materials that are added to the gel coat by the supplier or the facility, excluding catalysts and promoters. Neat gel coat plus does include any additions of styrene or methyl methacrylate monomer in any form, including in catalysts and promoters.

Neat resin means the resin as purchased from the supplier, but not including any inert fillers.

Neat resin plus means neat resin plus any organic HAP-containing materials that are added to the resin by the supplier or the facility. Neat resin plus does not include any added filler, reinforcements, catalysts, or promoters. Neat resin does include any additions of styrene or methyl methacrylate monomer in any form, including in catalysts and promoters.

Nonatomized mechanical application means the use of application tools other than brushes to apply resin and gel coat where the application tool has documentation provided by its manufacturer or user that this design of the application tool has been organic HAP emissions tested, and the test results showed that use of this application tool results in organic HAP emissions that are no greater than the organic HAP emissions predicted by the applicable nonatomized application equation(s) in Table 1 to this subpart. In addition, the device must be operated according to the manufacturer's directions, including instructions to prevent the operation of the device at excessive spray pressures. Examples of nonatomized application include flow coaters, pressure fed rollers, and fluid impingement spray guns.

Noncorrosion-resistant resin means any resin other than a corrosion-resistant resin or a tooling resin.

Noncorrosion-resistant product means any product other than a corrosion-resistant product or a mold.

Non-routine manufacture means that you manufacture parts to replace worn or damaged parts of a reinforced plastic composites product, or a product containing reinforced plastic composite parts, that was originally manufactured in another facility. For a part to qualify as non-routine manufacture, it must be used for repair or replacement, and the manufacturing schedule must be based on the current or anticipated repair needs of the reinforced plastic composites product, or a product containing reinforced plastic composite parts.

Operation means a specific process typically found at a reinforced plastic composites facility. Examples of operations are noncorrosion-resistant manual resin application, corrosion-resistant mechanical resin application, pigmented gel coat application, mixing and HAP-containing materials storage.

Operation group means a grouping of individual operations based primarily on mold type. Examples are open molding, closed molding, and centrifugal casting.

Open molding means a process for fabricating composites in a way that HAP-containing materials are exposed to the atmosphere. Open molding includes processes such as manual resin application, mechanical resin application, filament application, and gel coat application. Open molding also includes application of resins and gel coats to parts that have been removed from the open mold.

Pigmented gel coat means a gel coat that has a color, but does not contain 10 percent of more titanium dioxide by weight. It can be used to form the surface layer of any composites other than those used for molds in tooling operations.

Polymer casting means a process for fabricating composites in which composite materials are ejected from a casting machine or poured into an open, partially open, or closed mold and cured. After the composite materials are poured into the mold, they are not rolled out or worked while the mold is open. The composite materials may or may not include reinforcements. Products produced by the polymer casting process include cultured marble products and polymer concrete.

Preform Injection means a form of pultrusion where liquid resin is injected to saturate reinforcements in an enclosed system containing one or more chambers with openings only large enough to admit reinforcements. Resin, which drips out of the chamber(s) during the process, is collected in closed piping or covered troughs and then into a covered reservoir for recycle.

Resin storage vessels, reservoirs, transfer systems, and collection systems are covered or shielded from the ambient air. Preform injection differs from direct die injection in that the injection chambers are not directly attached to the die.

Prepreg materials means reinforcing fabric received precoated with resin which is usually cured through the addition of heat.

Pultrusion means a continuous process for manufacturing composites that have a uniform cross-sectional shape. The process consists of pulling a fiber-reinforcing material through a resin impregnation chamber or bath and through a shaping die, where the resin is subsequently cured. There are several types of pultrusion equipment, such as open bath, resin injection, and direct die injection equipment.

Repair means application of resin or gel coat to a part to correct a defect, where the resin or gel coat application occurs after the part has gone through all the steps of its typical production process, or the application occurs outside the normal production area. For purposes of this subpart, rerouting a part back through the normal production line, or part of the normal production line, is not considered repair.

Resin transfer molding means a process for manufacturing composites whereby catalyzed resin is transferred or injected into a closed mold in which fiberglass reinforcement has been placed.

Sheet molding compound (SMC) means a ready-to-mold putty-like molding compound that contains resin(s) processed into sheet form. The molding compound is sandwiched between a top and a bottom film. In addition to resin(s), it may also contain catalysts, fillers, chemical thickeners, mold release agents, reinforcements, and other ingredients. Sheet molding compound can be used in compression molding to manufacture reinforced plastic composites products.

Shrinkage controlled resin means a resin that when promoted, catalyzed, and filled according to the resin manufacturer's recommendations demonstrates less than 0.3 percent linear shrinkage when tested according to ASTM D2566.

SMC manufacturing means a process which involves the preparation of SMC.

Tooling gel coat means a gel coat that is used to form the surface layer of molds. Tooling gel coats generally have high heat distortion temperatures, low shrinkage, high barcol hardness, and high dimensional stability.

Tooling resin means a resin that is used to produce molds. Tooling resins generally have high heat distortion temperatures, low shrinkage, high barcol hardness, and high dimensional stability.

Uncontrolled oven organic HAP emissions means those organic HAP emissions emitted from the oven through closed vent systems to the atmosphere and not to a control device. These organic HAP emissions do not include organic HAP emissions that may escape into the workplace through the opening of panels or doors on the ovens or other similar fugitive organic HAP emissions in the workplace.

Uncontrolled wet-out area organic HAP emissions means any or all of the following: Organic HAP emissions from wet-out areas that do not have any capture and control, organic HAP emissions that escape from wet-out area enclosures, and organic HAP emissions from wet-out areas that are captured by an enclosure but are vented to the atmosphere and not to an add-on control device.

Unfilled means that there has been no addition of fillers to a resin or that less than 10 percent of fillers by weight of the total resin plus filler mixture has been added.

Vapor suppressant means an additive, typically a wax, that migrates to the surface of the resin during curing and forms a barrier to seal in the styrene and reduce styrene emissions.

Vapor-suppressed resin means a resin containing a vapor suppressant added for the purpose of reducing styrene emissions during curing.

White and off-white gel coat means a gel coat that contains 10 percent of more titanium dioxide by weight.

TABLE 1 TO SUBPART WWWW OF PART 63—EQUATIONS TO CALCULATE ORGANIC HAP EMISSIONS FACTORS FOR SPECIFIC OPEN MOLDING AND CENTRIFUGAL CASTING PROCESS STREAMS

[As required in §§ 63.5796, 63.5799(a)(1) and (b), and 63.5810(a)(1), to calculate organic HAP emissions factors for specific open molding and centrifugal casting process streams you must use the equations in the following table:]

If your operation type is a new or existing . . .	And you use . . .	With . . .	Use this organic HAP Emissions Factor (EF) Equation for materials with less than 33 percent organic HAP (19 percent organic HAP for nonatomized gel coat) [1 2 3] . . .	Use this organic HAP Emissions Factor (EF) Equation for materials with 33 percent or more organic HAP (19 percent for nonatomized gel coat) [1 2 3] . . .
1. Open molding operation	a. Manual resin application	i. Nonvapor-suppressed resin.	EF = 0.126 × % HAP × 2000.	EF = ((0.286 × %HAP) − 0.0529) × 2000
		ii. Vapor-suppressed resin	EF = 0.126 × % HAP × 2000 × (1 − (0.5 × VSE factor)).	EF = ((0.286 × %HAP) − 0.0529) × 2000 × (1 − (0.5 × VSE factor))
		iii. Vacuum bagging/closed-mold curing with roll out.	EF = 0.126 × % HAP × 2000 × 0.8.	EF = ((0.286 × %HAP) − 0.0529) × 2000 × 0.8
		iv. Vacuum bagging/closed-mold curing without roll-out.	EF = (0.126 × % HAP × 2000 × 0.5.	EF = ((0.286 × %HAP) − 0.0529) × 2000 × 0.5
	b. Atomized mechanical resin application.	i. Nonvapor-suppressed resin.	EF = 0.169 × %HAP × 2000.	EF = ((0.714 × %HAP) − 0.18) × 2000
		ii. Vapor-suppressed resin	EF = 0.169 × %HAP × 2000 × (1 − (0.45 × VSE factor)).	EF = ((0.714 × %HAP) − 0.18) × 2000 × (1 − (0.45 × VSE factor))

TABLE 1 TO SUBPART WWWW OF PART 63—EQUATIONS TO CALCULATE ORGANIC HAP EMISSIONS FACTORS FOR SPECIFIC OPEN MOLDING AND CENTRIFUGAL CASTING PROCESS STREAMS—Continued

[As required in §§ 63.5796, 63.5799(a)(1) and (b), and 63.5810(a)(1), to calculate organic HAP emissions factors for specific open molding and centrifugal casting process streams you must use the equations in the following table:]

If your operation type is a new or existing . . .	And you use . . .	With . . .	Use this organic HAP Emissions Factor (EF) Equation for materials with less than 33 percent organic HAP (19 percent organic HAP for nonatomized gel coat) [1 2 3] . . .	Use this organic HAP Emissions Factor (EF) Equation for materials with 33 percent or more organic HAP (19 percent for nonatomized gel coat) [1 2 3] . . .
		iii. Vacuum bagging/closed-mold curing with roll-out.	EF = 0.169 × %HAP × 2000 × 0.85.	EF = ((0.714 × %HAP) − 0.18) × 2000 × 0.85
		iv. Vacuum bagging/closed-mold curing without roll-out.	EF = 0.169 × %HAP × 2000 × 0.55.	EF = ((0.714 × %HAP) − 0.18) × 2000 × 0.55
	c. Nonatomized mechanical resin application.	v. Nonvapor-suppressed resin.	EF = 0.107 × %HAP × 2000.	EF = ((0.157 × %HAP) − 0.0165) × 2000
		vi. Vapor-suppressed resin	EF = 0.107 × %HAP × 2000 × (1 − (0.45 × VSE factor)).	EF = ((0.157 × %HAP) − 0.0165) × 2000 × (1 − (0.45 × VSE factor))
		vii. Closed-mold curing with roll-out.	EF = 0.107 × %HAP × 2000 × 0.85.	EF = ((0.157 × %HAP) − 0.0165) × 2000 × 0.85
		viii. Vacuum bagging/closed-mold curing without roll-out.	EF = 0.107 × %HAP × 2000 × 0.55.	EF = ((0.157 × %HAP) − 0.0165) × 2000 × 0.55
	d. Atomized mechanical resin application with robotic or automated spray control [4].	Nonvapor-suppressed resin.	EF = 0.169 × %HAP × 2000 × 0.77.	EF = 0.77 × ((0.714 × %HAP) − 0.18) × 2000
	e. Filament application [5]	i. Nonvapor-suppressed resin.	EF = 0.184 × %HAP × 2000.	EF = ((0.2746 × %HAP) − 0.0298) × 2000
		ii. Vapor-suppressed resin	EF = 0.12 × %HAP × 2000	EF = ((0.2746 × %HAP) − 0.0298) × 2000 × 0.65
	f. Atomized spray gel coat application.	Nonvapor-suppressed gel coat.	EF = 0.446 × %HAP × 2000.	EF = ((1.03646 × %HAP) − 0.195) × 2000.
	g. Nonatomized spray gel coat application.	Nonvapor-suppressed gel coat.	EF = 0.185 × %HAP × 2000.	EF = ((0.4506 × %HAP) − 0.0505) × 2000.
	h. Manual gel coat application [6].	Nonvapor-suppressed gel coat.	EF = 0.126 × % HAP × 2000 (for emissions estimation only, see footnote 6).	EF = ((0.286 × %HAP) − 0.0529) × 2000 (for emissions estimation only, see footnote 6)
2. Centrifugal casting operations. [7 8].	Heated air blown through molds.	Nonvapor-suppressed resin.	EF = 0.558 × (%HAP) × 2000.	EF = 0.558 × (%HAP) × 2000.
	Vented molds, but air vented through the molds is not heated.	Nonvapor-suppressed resin.	EF = 0.026 × (%HAP) × 2000.	EF = 0.026 × (%HAP) × 2000.

Footnotes to Table 1

[1] To obtain the organic HAP emissions factor value for an operation with an add-on control device multiply the EF above by the add-on control factor calculated using Equation 1 of § 63.5810. The organic HAP emissions factors have units of lbs of organic HAP per ton of resin or gel coat applied.

[2] Percent HAP means total weight percent of organic HAP (styrene, methyl methacrylate, and any other organic HAP) in the resin or gel coat prior to the addition of fillers, catalyst, and promoters. Input the percent HAP as a decimal, *i.e.* 33 percent HAP should be input as 0.33, not 33.

[3] The VSE factor means the percent reduction in organic HAP emissions expressed as a decimal measured by the VSE test method of appendix A to this subpart.

[4] This equation is based on a organic HAP emissions factor equation developed for mechanical atomized controlled spray. It may only be used for automated or robotic spray systems with atomized spray. All spray operations using hand held spray guns must use the appropriate mechanical atomized or mechanical nonatomized organic HAP emissions factor equation. Automated or robotic spray systems using nonatomized spray should use the appropriate nonatomized mechanical resin application equation.

[5] Applies only to filament application using an open resin bath. If resin is applied manually or with a spray gun, use the appropriate manual or mechanical application organic HAP emissions factor equation.

[6] Do not use this equation for determining compliance with emission limits in Tables 3 or 5 to this subpart. To determine compliance with emission limits you must treat all gel coat as if it were applied as part of your gel coat spray application operations. If you apply gel coat by manual techniques only, you must treat the gel coat as if it were applied with atomized spray and use Equation 1.f. to determine compliance with the appropriate emission limits in Tables 3 or 5 to this subpart. To estimate emissions from manually applied gel coat, you may either include the gel coat quantities you apply manually with the quantities applied using spray, or use this equation to estimate emissions from the manually applied portion of your gel coat.

[7] These equations are for centrifugal casting operations where the mold is vented during spinning. Centrifugal casting operations where the mold is completely sealed after resin injection are considered to be closed molding operations.

[8] If a centrifugal casting operation uses mechanical or manual resin application techniques to apply resin to an open centrifugal casting mold, use the appropriate open molding equation with covered cure and no rollout to determine an emission factor for operations prior to the closing of the centrifugal casting mold. If the closed centrifugal casting mold is vented during spinning, use the appropriate centrifugal casting equation to calculate an emission factor for the portion of the process where spinning and cure occur. If a centrifugal casting operation uses mechanical or manual resin application techniques to apply resin to an open centrifugal casting mold, and the mold is then closed and is not vented, treat the entire operation as open molding with covered cure and no rollout to determine emission factors.

TABLE 2 TO SUBPART WWWW OF PART 63.—COMPLIANCE DATES FOR NEW AND EXISTING REINFORCED PLASTIC COMPOSITES FACILITIES

[As required in §§ 63.5800 and 63.5840 you must demonstrate compliance with the standards by the dates in the following table:]

If your facility is . . .	And . . .	Then you must comply by this date . . .
1. An existing source	a. Is a major source on or before the publication date of this subpart.	i. April 21, 2006, or ii. You must accept and meet an enforceable HAP emissions limit below the major source threshold prior to April 21, 2006.
2. An existing source that is an area source	Becomes a major source after the publication date of this subpart.	3 years after becoming a major source or April 21, 2006, whichever is later.
3. An existing source, and emits less than 100 tpy of organic HAP from the combination of all centrifugal casting and continuous lamination/casting operations at the time of initial compliance with this subpart.	Subsequently increases its actual organic HAP emissions to 100 tpy or more from these operations, which requires that the facility must now comply with the standards in § 63.5805(b).	3 years of the date your semi-annual compliance report indicates your facility meets or exceeds the 100 tpy threshold.
4. A new source	Is a major source at startup	Upon startup or April 21, 2003, whichever is later.
5. A new source	Is an area source at startup and becomes a major source.	Immediately upon becoming a major source.
6. A new source, and emits less than 100 tpy of organic HAP from the combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC and BMC manufacturing, and mixing operations at the time of initial compliance with this subpart.	Subsequently increases its actual organic HAP emissions to 100 tpy or more from the combination of these operations, which requires that the facility must now meet the standards in § 63.5805(d).	3 years from the date that your semi-annual compliance report indicates your facility meets or exceeds the 100 tpy threshold.

TABLE 3 TO SUBPART WWWW OF PART 63.—ORGANIC HAP EMISSIONS LIMITS FOR EXISTING OPEN MOLDING SOURCES, NEW OPEN MOLDING SOURCES EMITTING LESS THAN 100 TPY OF HAP, AND NEW AND EXISTING CENTRIFUGAL CASTING AND CONTINUOUS LAMINATION/CASTING SOURCES THAT EMIT LESS THAN 100 TPY OF HAP

[As required in §§ 63.5796, 63.5805 (a) through (c) and (g), 63.5810(a), (b), and (d), 63.5820(c), 63.5830, 63.5835(a), 63.5895(c) and (d), 63.5900(a)(2), and 63.5915(c), you must meet the appropriate organic HAP emissions limits in the following table:]

If your operation type is . . .	And you use . . .	Your organic HAP emissions limit is [1] . . .	And the highest organic HAP content for a compliant resin or gel coat is [2] . . .
1. Open molding—corrosion-resistant and/or high strength (CR/HS).	a. Mechanical resin application	112 lb/ton	46.2 with nonatomized resin application.
	b. Filament application	171 lb/ton	42.0.
	c. Manual resin application	123 lb/ton	40.0.
2. Open molding—non-CR/HS	a. Mechanical resin application	87 lb/ton	38.4 with nonatomized resin application.
	b. Filament application	188 lb/ton	45.0.
	c. Manual resin application	87 lb/ton	33.6.
3. Open molding—tooling	a. Mechanical resin application	254 lb/ton	43.0 with atomized application, 91.4 with nonatomized application.
	b. Manual resin application	157 lb/ton	45.9.
4. Open molding—low-flame spread/low-smoke products.	a. Mechanical resin application	497 lb/ton	60.0.
	b. Filament application	270 lb/ton	60.0.
	c. Manual resin application	238 lb/ton	60.0.
5. Open molding—shrinkage controlled resins.	a. Mechanical resin application	354 lb/ton	50.0.
	b. Filament application	215 lb/ton	50.0.
	c. Manual resin application	180 lb/ton	50.0.
6. Open molding—gel coat [3]	a. Tooling gel coating	437 lb/ton	40.0.
	b. White/off white pigmented gel coating.	267 lb/ton	30.0.
	c. All other pigmented gel coating	377 lb/ton	37.0.
	d. CR/HS or high performance gel coat.	605 lb/ton	48.0.
	e. Fire retardant gel coat	854 lb/ton	60.0.
	f. Clear production gel coat	522 lb/ton	44.0.

TABLE 3 TO SUBPART WWWW OF PART 63.—ORGANIC HAP EMISSIONS LIMITS FOR EXISTING OPEN MOLDING SOURCES, NEW OPEN MOLDING SOURCES EMITTING LESS THAN 100 TPY OF HAP, AND NEW AND EXISTING CENTRIFUGAL CASTING AND CONTINUOUS LAMINATION/CASTING SOURCES THAT EMIT LESS THAN 100 TPY OF HAP—Continued

[As required in §§ 63.5796, 63.5805 (a) through (c) and (g), 63.5810(a), (b), and (d), 63.5820(c), 63.5830, 63.5835(a), 63.5895(c) and (d), 63.5900(a)(2), and 63.5915(c), you must meet the appropriate organic HAP emissions limits in the following table:]

If your operation type is . . .	And you use . . .	Your organic HAP emissions limit is [1] . . .	And the highest organic HAP content for a compliant resin or gel coat is [2] . . .
7. Centrifugal casting—CR/HS [4 5]	N/A	25 lb/ton	48.0.
8. Centrifugal casting—non-CR/HS [4 5].	N/A	20 lb/ton	37.5.
9. Pultrusion [6]	N/A	Reduce total organic HAP emissions by at least 60 weight percent.	NA.
10. Continuous lamination/casting	N/A	Reduce total organic HAP emissions by at least 58.5 weight percent or not exceed a organic HAP emissions limit of 15.7 lbs of organic HAP per ton of neat resin plus and neat gel coat plus.	NA.

Footnotes to Table 3

[1] Organic HAP emissions limits for open molding and centrifugal casting are expressed as lb/ton. You must be at or below these values based on a 12-month rolling average.

[2] A compliant resin or gel coat means that if its organic HAP content is used to calculate an organic HAP emissions factor, the factor calculated does not exceed the appropriate organic HAP emissions limit shown in the table.

[3] These limits are for spray application of gel coat. Manual gel coat application must be included as part of spray gel coat application for compliance purposes using the same organic HAP emissions factor equation and organic HAP emissions limit. If you only apply gel coat with manual application, treat the manually applied gel coat as if it were applied with atomized spray for compliance determinations.

[4] Centrifugal casting operations where the mold is not vented during spinning and cure are considered to be closed molding and are not subject to any emissions limit. Centrifugal casting operations where the mold is not vented during spinning and cure, and the resin is applied to the open centrifugal casting mold using mechanical or manual open molding resin application techniques are considered to be open molding operations and the appropriate open molding emission limits apply.

[5] Centrifugal casting operations where the mold is vented during spinning and the resin is applied to the open centrifugal casting mold using mechanical or manual open molding resin application techniques, use the appropriate centrifugal casting emission limit to determine compliance. Calculate your emission factor using the appropriate centrifugal casting emission factor in Table 1 to this subpart, or a site specific emission factor as discussed in § 63.5796.

[6] Pultrusion machines that produce parts with 1000 or more reinforcements and a cross sectional area of 60 inches or more are not subject to this requirement. Their requirement is the work practice of air flow management which is described in Table 4 to this subpart.

TABLE 4 TO SUBPART WWWW OF PART 63.—WORK PRACTICE STANDARDS

[As required in §§ 63.5805 (a) through (d) and (g), 63.5835(a), 63.5900(a)(3), 63.5910(c)(5), and 63.5915(d), you must meet the appropriate work practice standards in the following table:]

For . . .	You must . . .
1. A new or existing closed molding operation using compression/injection molding.	Uncover, unwrap or expose only one charge per mold cycle per compression/injection molding machine. For machines with multiple molds, one charge means sufficient material to fill all molds for one cycle. For machines with robotic loaders, no more than one charge may be exposed prior to the loader. For machines fed by hoppers, sufficient material may be uncovered to fill the hopper. Hoppers must be closed when not adding materials. Materials may be uncovered to feed to slitting machines. Materials must be recovered after slitting.
2. A new or existing cleaning operation	Not use cleaning solvents that contain HAP, except that styrene may be used as a cleaner in closed systems, and organic HAP containing cleaners may be used to clean cured resin from application equipment. Application equipment includes any equipment that directly contacts resin.
3. A new or existing materials HAP-containing materials storage operation.	Keep containers that store HAP-containing materials closed or covered except during the addition or removal of materials. Bulk HAP-containing materials storage tanks may be vented as necessary for safety.
4. An existing or new SMC manufacturing operation.	Close or cover the resin delivery system to the doctor box on each SMC manufacturing machine. The doctor box itself may be open.
5. An existing or new SMC manufacturing operation.	Use a nylon containing film to enclose SMC.
6. An existing or new mixing or BMC manufacturing operation.	Use mixer covers with no visible gaps present in the mixer covers, except that gaps of up to 1 inch are permissible around mixer shafts and any required instrumentation.
7. An existing mixing or BMC manufacturing operation.	Close any mixer vents when actual mixing is occurring, except that venting is allowed during addition of materials, or as necessary prior to adding materials or opening the cover for safety.
8. A new or existing mixing or BMC manufacturing operation [1].	Keep the mixer covers closed while actual mixing is occurring except when adding materials or changing covers to the mixing vessels.

TABLE 4 TO SUBPART WWWW OF PART 63.—WORK PRACTICE STANDARDS—Continued

[As required in §§ 63.5805 (a) through (d) and (g), 63.5835(a), 63.5900(a)(3), 63.5910(c)(5), and 63.5915(d), you must meet the appropriate work practice standards in the following table:]

For . . .	You must . . .
9. A new or existing pultrusion operation manufacturing parts with 1,000 or more reinforcements and a cross section area of 60 square inches or more that is not subject to the 95 percent organic HAP emission reduction requirement.	i. Not allow vents from the building ventilation system, or local or portable fans to blow directly on or across the wet-out area(s), ii. Not permit point suction of ambient air in the wet-out area(s) unless that air is directed to a control device, iii. Use devices such as deflectors, baffles, and curtains when practical to reduce air flow velocity across the wet-out area(s), iv. Direct any compressed air exhausts away from resin and wet-out area(s), v. convey resin collected from drip-off pans or other devices to reservoirs, tanks, or sumps via covered troughs, pipes, or other covered conveyance that shields the resin from the ambient air, vi. Cover all reservoirs, tanks, sumps, or HAP-containing materials storage vessels except when they are being charged or filled, and vii. Cover or shield from ambient air resin delivery systems to the wet-out area(s) from reservoirs, tanks, or sumps where practical.

[1] Containers of 5 gallons or less may be open when active mixing is taking place, or during periods when they are in process (*i.e.*, they are actively being used to apply resin). For polymer casting mixing operations, containers with a surface area of 500 square inches or less may be open while active mixing is taking place.

TABLE 5 TO SUBPART WWWW OF PART 63.—ALTERNATIVE ORGANIC HAP EMISSIONS LIMITS FOR OPEN MOLDING, CENTRIFUGAL CASTING, AND SMC MANUFACTURING OPERATIONS WHERE THE STANDARD IS BASED ON A 95 PERCENT REDUCTION REQUIREMENT

[As specified in §§ 63.5796, 63.5805(b) and (d), 63.5810(a) and (b), 63.5835(a), 63.5895(c), 63.5900(a)(2), and 63.5915(c), as an alternative to the 95 percent organic HAP emissions reductions requirement, you may meet the appropriate organic HAP emissions limits in the following table:]

If your operation type is . . .	And you use . . .	LYour organic HAP emissions limit is a[1]. . .
1. Open molding—corrosion-resistant and/or high strength (CR/HS).	a. Mechanical resin application	6 lb/ton.
	b. Filament application	9 lb/ton.
	c. Manual resin application	7 lb/ton.
2. Open molding—non-CR/HS	a. mechanical resin application	13 lb/ton.
	b. Filament application	10 lb/ton.
	c. Manual resin application	5 lb/ton.
3. Open molding—tooling	a. Mechanical resin application	13 lb/ton.
	b. Manual resin application	8 lb/ton.
4. Open molding—low flame spread/low smoke products	a. Mechanical resin application	25 lb/ton.
	b. Filament application	14 lb/ton.
	c. Manual resin application	12 lb/ton.
5. Open molding—shrinkage controlled resins	a. Mechanical resin application	18 lb/ton.
	b. Filament application	11 lb/ton.
	c. Manual resin application	9 lb/ton.
6. Open molding—gel coat[2]	a. Tooling gel coating	22 lb/ton.
	b. White/off white pigmented gel coating	22 lb/ton.
	c. All other pigmented gel coating	19 lb/ton.
	d. CR/HS or high performance gel coat	31 lb/ton.
	e. Fire retardant gel coat	43 lb/ton.
	f. Clear production gel coat	27 lb/ton.
7. Centrifugal casting—CR/HS[3,4]	A vent system that moves heated air through the mold	27 lb/ton.
8. Centrifugal casting—non-CR/HS[3,4]	A vent system that moves heated air through the mold	21 lb/ton.
7. Centrifugal casting—CR/HS[3,4]	A vent system that moves ambient air through the mold	2 lb/ton.
8. Centrifugal casting—non-CR/HS[3,4]	A vent system that moves ambient air through the mold	1 lb/ton.
9. SMC Manufacturing	N/A	2.4 lb/ton.

[1] Organic HAP emissions limits for open molding and centrifugal casting expressed as lb/ton are calculated using the equations shown in Table 1 to this subpart. You must be at or below these values based on a 12-month rolling average.

[2] These limits are for spray application of gel coat. Manual gel coat application must be included as part of spray gel coat application for compliance purposes using the same organic HAP emissions factor equation and organic HAP emissions limit. If you only apply gel coat with manual application, treat the manually applied gel coat as if it were applied with atomized spray for compliance determinations.

[3] Centrifugal casting operations where the mold is not vented during spinning and cure are considered to be closed molding and are not subject to any emissions limit. Centrifugal casting operations where the mold is not vented during spinning and cure, and the resin is applied to the open centrifugal casting mold using mechanical or manual open molding resin application techniques are considered to be open molding operations and the appropriate open molding emission limits apply.

[4] Centrifugal casting operations where the mold is vented during spinning and the resin is applied to the open centrifugal casting mold using mechanical or manual open molding resin application techniques, use the appropriate centrifugal casting emission limit to determine compliance. Calculate your emission factor using the appropriate centrifugal casting emission factor in Table 1 to this subpart, or a site specific emission factor as discussed in § 63.5796.

TABLE 6 TO SUBPART WWWW OF PART 63—BASIC REQUIREMENTS FOR PERFORMANCE TESTS, PERFORMANCE EVALUATIONS, AND DESIGN EVALUATIONS FOR NEW AND EXISTING SOURCES USING ADD-ON CONTROL DEVICES

[As required in § 63.5850 you must conduct performance tests, performance evaluations, and design evaluation according to the requirements in the following table:]

For . . .	You must . . .	Using . . .	According to the following requirements . . .
1. Each enclosure used to collect and route organic HAP emissions to an add-on control device that is a PTE.	Meet the requirements for a PTE	EPA method 204 of appendix M of 40 CFR part 51.	Enclosures that meet the requirements of EPA Method 204 of appendix M of 40 CFR part 51 for a PTE are assumed to have a capture efficiency of 100%. Note that the criteria that all access doors and windows that are not treated as natural draft openings shall be closed during routine operation of the process is not intended to require that these doors and windows be closed at all times. It means that doors and windows must be closed any time that you are not actually moving parts or equipment through them. Also, any styrene retained in hollow parts and liberated outside the PTE is not considered to be a violation of the EPA Method 204 criteria.
2. Each enclosure used to collect and route organic HAP emissions to an add-on control device that is not a PTE.	a. Determine the capture efficiency of each enclosure used to capture organic HAP emissions sent to an add-on control device.	i. EPA methods 204B through E of appendix M of 40 CFR part 51, or	(1) Enclosures that do not meet the requirements for a PTE must determine the capture efficiency by constructing a temporary total enclosure according to the requirements of EPA Method 204 of appendix M of 40 CFR part 51 and measuring the mass flow rates of the organic HAP in the exhaust streams going to the atmosphere and to the control device. Test runs for EPA Methods 204B through E of appendix M of 40 CFR part 51 must be at least 3 hours.
		ii. An alternative test method that meets the requirements in 40 CFR part 51, appendix M.	(1) The alternative test method must the data quality objectives and lower confidence limit approaches for alternative capture efficiency protocols requirements contained in 40 CFR part 63 subpart KK, appendix A.
3. Each control device used to comply with a percent reduction requirement, or a organic HAP emissions limit.	Determine the control efficiency of each control device used to control organic HAP emissions.	The test methods specified in § 63.5850 to this subpart.	Testing and evaluation requirements are contained in 40 CFR part 63, subpart SS, and § 63.5850 to this subpart.
4. Determining organic HAP emission factors for any operation.	Determine the mass organic HAP emissions rate.	The test methods specified in § 63.5850 to this subpart.	Testing and evaluation requirements are contained in 40 CFR part 63, subpart SS, and § 63.5850 to this subpart.

TABLE 7 TO SUBPART WWWW OF PART 63.—OPTIONS ALLOWING USE OF THE SAME RESIN ACROSS DIFFERENT OPERATIONS THAT USE THE SAME RESIN TYPE

[As required in §§ 63.5810(a) through (d), 63.5835(a), 63.5895(c), and 63.5900(a)(2), when electing to use the same resin(s) for multiple resin application methods you may use any resin(s) with an organic HAP contents less than or equal to the values shown in the following table, or any combination of resins whose weighted average organic HAP content based on a 12-month rolling average is less than or equal to the values shown the following table:]

If your facility has the following resin type and application method . . .	The highest resin weight percent organic HAP content, or weighted average weight percent organic HAP content, you can use for . . .	Is . . .
1. CR/HS resins, centrifugal casting	a. CR/HS mechanical	48.0
	b. CR/HS filament application	48.0
	c. CR/HS manual	48.0
2. CR/HS resins, nonatomized mechanical	a. CR/HS filament application	46.2
	b. CR/HS manual	46.2
3. CR/HS resins, filament application	CR/HS manual	42.0
4. Non-CR/HS resins, filament application	a. non-CR/HS mechanical	45.0
	b. non-CR/HS manual	45.0
	c. non-CR/HS centrifugal casting	45.0
5. Non-CR/HS resins, nonatomized mechanical	a. Non-CR/HS manual	38.4
	b. non-CR/HS centrifugal casting	38.4
6. Non-CR/HS resins, centrifugal casting	Non-CR/HS manual	37.5
7. Tooling resins, nonatomized mechanical	Tooling manual	91.4
8. Tooling resins, manual	Tooling atomized mechanical	45.9

TABLE 8 TO SUBPART WWWW OF PART 63.—INITIAL COMPLIANCE WITH ORGANIC HAP EMISSIONS LIMITS

[As required in § 63.5860(a), you must demonstrate initial compliance with organic HAP emissions limits as specified in the following table:]

For . . .	That must meet the following organic HAP emissions limit . . .	You have demonstrated initial compliance if . . .
1. Open molding and centrifugal casting operations.	a. An organic HAP emissions limit shown in Tables 3 or 5 to this subpart, or an organic HAP content limit shown in Table 7 to this subpart.	i. You have met the appropriate organic HAP emissions limits for these operations as calculated using the procedures in § 63.5810 on a 12-month rolling average 1 year after the appropriate compliance date, or ii. You demonstrate by using the appropriate values in Tables 3, or 7 to this subpart that all resins and gel coats considered individually meet the appropriate organic HAP contents, or iii. You demonstrate by using the appropriate values in Table 7 to this subpart that the weighted average of all resins and gel coats for each resin type and application method meet the appropriate organic HAP contents.
2. Open molding, centrifugal casting, continuous lamination/casting, SMC and BMC manufacturing, and mixing operations.	a. Reduce total organic HAP emissions, by at least 95 percent by weight.	Total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency testing specified in Table 6 to this subpart, are reduced by at least 95 percent by weight.
3. Continuous lamination/casting operations	a. Reduce total organic HAP emissions by at least 58.5 weight percent, or.	Total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency testing specified in Table 6 to this subpart and the calculation procedures specified in §§ 63.5865 through 63.5890, are reduced by at least 58.5 percent by weight.
	b. Not exceed an HAP emissions limit of 15.7 lbs of organic HAP per ton of neat resin plus and neat gel coat plus.	Total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency testing specified in Table 6 to this subpart and the calculation procedures specified in §§ 63.5865 through 63.5890, do not exceed 15.7 lbs of organic HAP per ton of neat resin plus and neat gel coat plus.

TABLE 8 TO SUBPART WWWW OF PART 63.—INITIAL COMPLIANCE WITH ORGANIC HAP EMISSIONS LIMITS—Continued

[As required in § 63.5860(a), you must demonstrate initial compliance with organic HAP emissions limits as specified in the following table:]

For . . .	That must meet the following organic HAP emissions limit . . .	You have demonstrated initial compliance if . . .
4. Continuous lamination/casting operations	a. Reduce total organic HAP emissions by at least 95 weight percent or	Total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency testing specified in Table 6 to this subpart, and the calculation procedures specified in §§ 63.5865 through 63.5890, are reduced by at least 95 percent by weight.
	b. Not exceed an organic HAP emissions limit of 1.47 lbs of organic HAP per ton of neat resin plus and neat gel coat plus.	Total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency testing specified in Table 6 and the calculation procedures specified in §§ 63.5865 through 63.5890, do not exceed 1.47 lbs of organic HAP per ton of neat resin plus and neat gel coat plus.
5. Pultrusion operations	a. Reduce total organic HAP emissions by at least 60 percent by weight.	i. Total organic HAP emissions, based on the results of the capture efficiency and add-on control device destruction efficiency testing specified in Table 6 to this subpart, are reduced by at least 60 percent by weight and ii. As part of the notification of initial compliance status, the owner/operator submits a certified statement that all pultrusion lines not controlled with an add-on control device are using direct die injection, preform injection, and/or wet-area enclosures that meet the criteria of § 63.5830.
6. Pultrusion operations	a. Reduce total organic HAP emissions by at least 95 percent by weight.	i. Total organic HAP emissions, based on the results of the capture efficiency and add-on control device destruction efficiency testing specified in Table 6 to this subpart, are reduced by at least 95 percent by weight.

TABLE 9 TO SUBPART WWWW OF PART 63.—INITIAL COMPLIANCE WITH WORK PRACTICE STANDARDS

[As required in § 63.5860(a), you must demonstrate initial compliance with work practice standards as specified in the following table:]

For . . .	That must meet the following standard . . .	You have demonstrated initial compliance if . . .
1. A new or existing closed or molding operation using compression/injection molding.	Uncover, unwrap or expose only one charge per mold cycle per compression/injection molding machine. For machines with multiple molds, one charge means sufficient material to fill all molds for one cycle. For machines with robotic loaders, no more than one charge may be exposed prior to the loader. For machines fed by hoppers, sufficient material may be uncovered to fill the hopper. Hoppers must be closed when not adding materials. Materials may be uncovered to feed to slitting machines. Materials must be recovered after slitting.	The owner operator submits a certified statement in the notice of compliance status that only one charge is uncovered, unwrapped or exposed per mold cycle per compression/injection molding machine, or prior to the loader, hoppers are closed except when adding materials, and materials are recovered after slitting.
2. A new or existing cleaning operation	Not use cleaning solvents that contain HAP, except that styrene may be used in closed systems, and organic HAP containing materials may be used to clean cured resin from application equipment. Application equipment includes any equipment that directly contacts resin between storage and applying resin to the mold or reinforcement.	The owner or operator submits a certified statement in the notice of compliance status that all cleaning materials, except styrene contained in closed systems, or materials used to clean cured resin from application equipment contain no HAP.
3. A new or existing materials HAP-containing materials storage operation.	Keep containers that store HAP-containing materials closed or covered except during the addition or removal of materials. Bulk HAP-containing materials storage tanks may be vented as necessary for safety.	The owner or operator submits a certified statement in the notice of compliance status that all HAP-containing storage containers are kept closed or covered except when adding or removing materials, and that any bulk storage tanks are vented only as necessary for safety.

TABLE 9 TO SUBPART WWWW OF PART 63.—INITIAL COMPLIANCE WITH WORK PRACTICE STANDARDS—Continued

[As required in § 63.5860(a), you must demonstrate initial compliance with work practice standards as specified in the following table:]

For . . .	That must meet the following standard . . .	You have demonstrated initial compliance if . . .
4. An existing or new SMC manufacturing operation.	Close or cover the resin delivery system to the doctor box on each SMC manufacturing machine. The doctor box itself may be open.	The owner or operator submits a certified statement in the notice of compliance status that the resin delivery system is closed or covered.
5. An existing or new SMC manufacturing operation.	Use a nylon containing film to enclose SMC.	The owner or operator submits a certified statement in the notice of compliance status that a nylon-containing film is used to enclose SMC.
6. An existing or new mixing or BMC manufacturing operation.	Use mixer covers with no visible gaps present in the mixer covers, except that gaps of up to 1 inch are permissible around mixer shafts and any required instrumentation.	The owner or operator submits a certified statement in the notice of compliance status that mixer covers are closed during mixing except when adding materials to the mixers, and that gaps around mixer shafts and required instrumentation are less than 1 inch.
7. An existing mixing or BMC manufacturing operation.	Not actively vent mixers to the atmosphere while the mixing agitator is turning, except that venting is allowed during addition of materials, or as necessary prior to adding materials for safety.	The owner or operator submits a certified statement in the notice of compliance status that mixers are not actively vented to the atmosphere when the agitator is turning, except when adding materials or as necessary for safety.
8. A new or existing mixing or BMC manufacturing operation.	Keep the mixer covers closed during mixing except when adding materials to the mixing vessels.	The owner or operator submits a certified statement in the notice of compliance status that mixers closed except when adding materials to the mixing vessels.
9. A new or existing pultrusion operation manufacturing parts with 1000 or more reinforcements and a cross section area of 60 square inches or more that is not subject to the 95 percent organic HAP emission reduction requirement.	i. Not allow vents from the building ventilation system, or local or portable fans to blow directly on or across the wet-out area(s), ii. not permit point suction of ambient air in the wet-out area(s) unless that air is directed to a control device, iii. use devices such as deflectors, baffles, and curtains when practical to reduce air flow velocity across wet-out area(s), iv. direct any compressed air exhausts away from resin and wet-out area(s), v. convey resin collected from drip-off pans or other devices to reservoirs, tanks, or sumps via covered troughs, pipes, or other covered conveyance that shields the resin from the ambient air, vi. cover all reservoirs, tanks, sumps, or HAP-containing materials storage vessels except when they are being charged or filled, and vii. cover or shield from ambient air resin delivery systems to the wet-out area(s) from reservoirs, tanks, or sumps where practical.	The owner or operator submits a certified statement in the notice of compliance status that they have complied with all the requirements listed in the 9.i through 9.vii.

TABLE 10 TO SUBPART WWWW OF PART 63.—DATA REQUIREMENTS FOR NEW AND EXISTING CONTINUOUS LAMINATION LINES AND CONTINUOUS CASTING LINES COMPLYING WITH A PERCENT REDUCTION LIMIT ON A PER LINE BASIS

[As required in § 63.5865(a), in order to comply with a percent reduction limit for continuous lamination lines and continuous casting lines you must determine the data in the following table:]

For each line where the wet-out area . . .	And the oven . . .	You must determine . . .
1. Has an enclosure that is not a permanent total enclosure (PTE) and the captured organic HAP emissions are controlled by an add-on control device.	a. Is uncontrolled	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual controlled wet-out area organic HAP emissions, iii. Annual uncontrolled oven organic HAP emissions, iv. The capture efficiency of the wet-out area enclosure, v. The destruction efficiency of the add-on control device, and vi. The amount of neat resin plus and neat gel coat plus applied.

TABLE 10 TO SUBPART WWWW OF PART 63.—DATA REQUIREMENTS FOR NEW AND EXISTING CONTINUOUS LAMINATION LINES AND CONTINUOUS CASTING LINES COMPLYING WITH A PERCENT REDUCTION LIMIT ON A PER LINE BASIS—Continued

[As required in § 63.5865(a), in order to comply with a percent reduction limit for continuous lamination lines and continuous casting lines you must determine the data in the following table:]

For each line where the wet-out area . . .	And the oven . . .	You must determine . . .
2. Has an enclosure that is a PTE and the captured organic HAP emissions are controlled by an add-on control device.	a. Is uncontrolled	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual controlled wet-out area organic HAP emissions, iii. Annual uncontrolled oven organic HAP emissions, iv. That the wet-out area enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE, v. The destruction efficiency of the add-on control device, and vi. The amount of neat resin plus and neat gel coat plus applied.
3. Is uncontrolled	a. Is controlled by an add-on control device	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual uncontrolled oven organic HAP emissions, iii. Annual controlled oven organic HAP emissions, iv. The capture efficiency of the oven, v. the destruction efficiency of the add-on control device, and vi. the amount of neat resin plus and neat gel coat plus applied.
4. Has an enclosure that is not a PTE and the captured organic HAP emissions are controlled by an add-on control device.	a. Is controlled by an add-on control device	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual controlled wet-out area organic HAP emissions, iii. Annual uncontrolled oven organic HAP emissions, iv. Annual controlled oven organic HAP emissions; v. The capture efficiency of the wet-out area enclosure, vi. Inlet organic HAP emissions to the add-on control device, vii. Outlet organic HAP emissions from the add-on control device, and viii. The amount of neat resin plus and neat gel coat plus applied.
5. Has an enclosure that is a PTE and the captured organic HAP emissions are controlled by an add-on control device.	a. Is controlled by an add-on control device	i. That the wet-out area enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE, ii. The capture efficiency of the oven, and iii. The destruction efficiency of the add-on control device.

TABLE 11 TO SUBPART WWWW OF PART 63.—DATA REQUIREMENTS FOR NEW AND EXISTING CONTINUOUS LAMINATION AND CONTINUOUS CASTING LINES COMPLYING WITH A PERCENT REDUCTION LIMIT OR A LBS/TON LIMIT ON AN AVERAGING BASIS

[As required in § 63.5865, in order to comply with a percent reduction limit or a lbs/ton limit on an averaging basis for continuous lamination lines and continuous casting lines you must determine the data in the following table:]

For each . . .	That . . .	You must determine . . .
1. Wet-out area	Is uncontrolled	Annual uncontrolled wet-out area organic HAP emissions.
2. Wet-out area	a. Has an enclosure that is not a PTE	i. The capture efficiency of the enclosure, and ii. Annual organic HAP emissions that escape the enclosure.
3. Wet-out area	Has an enclosure that is a PTE	That the enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE.
4. Oven	Is uncontrolled	Annual uncontrolled oven organic HAP emissions.

TABLE 11 TO SUBPART WWWW OF PART 63.—DATA REQUIREMENTS FOR NEW AND EXISTING CONTINUOUS LAMINATION AND CONTINUOUS CASTING LINES COMPLYING WITH A PERCENT REDUCTION LIMIT OR A LBS/TON LIMIT ON AN AVERAGING BASIS—Continued

[As required in § 63.5865, in order to comply with a percent reduction limit or a lbs/ton limit on an averaging basis for continuous lamination lines and continuous casting lines you must determine the data in the following table:]

For each . . .	That . . .	You must determine . . .
5. Line	a. Is controlled or uncontrolled	i. The amount of neat resin plus applied, and ii. The amount of neat gel coat plus applied.
6. Add-on control device		i. Total annual inlet organic HAP emissions, and total annual outlet organic HAP emissions.

TABLE 12 TO SUBPART WWWW OF PART 63.—DATA REQUIREMENTS FOR NEW AND EXISTING CONTINUOUS LAMINATION LINES AND CONTINUOUS CASTING LINES COMPLYING WITH A LBS/TON ORGANIC HAP EMISSIONS LIMIT ON A PER LINE BASIS

[As required in § 63.5865(b), in order to comply with a lbs/ton organic HAP emissions limit for continuous lamination lines and continuous casting lines you must determine the data in the following table:]

For each line where the wet- out area . . .	And the oven . . .	You must determine . . .
1. Is uncontrolled	a. Is uncontrolled	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual uncontrolled oven organic HAP emissions, and iii. Annual neat resin plus and neat gel coat plus applied.
2. Has an enclosure that is not a PTE and the captured organic HAP emissions are controlled by an add-on control device.	a. Is uncontrolled	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual controlled wet-out area organic HAP emissions, iii. Annual uncontrolled oven organic HAP emissions, iv. The capture efficiency of the wet-out area enclosure, v. The destruction efficiency of the add-on control device, and vi. The amount of neat resin plus and neat gel coat plus applied.
3. Has an enclosure that is a PTE, and the captured organic HAP emissions are controlled by an add-on control device.	a. Is uncontrolled	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual controlled wet-out area organic HAP emissions, iii. Annual uncontrolled oven organic HAP emissions, iv. That the wet-out area enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE, v. The destruction efficiency of the add-on control device, and vi. The amount of neat resin plus and neat gel coat plus applied.
4. Is uncontrolled	a. Is controlled by an add-on control device	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual uncontrolled oven organic HAP emissions, iii. Annual controlled oven organic HAP emissions, iv. The capture efficiency of the oven, v. The destruction efficiency of the add-on control device, and vi. The amount of neat resin plus and neat gel coat plus applied.
5. Has an enclosure that is not a PTE and the captured organic HAP emissions are controlled by an add-on control device.	a. Is controlled by an add-on control device	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual controlled wet-out area organic HAP emissions, iii. Annual uncontrolled oven organic HAP emissions,

TABLE 12 TO SUBPART WWWW OF PART 63.—DATA REQUIREMENTS FOR NEW AND EXISTING CONTINUOUS LAMINATION LINES AND CONTINUOUS CASTING LINES COMPLYING WITH A LBS/TON ORGANIC HAP EMISSIONS LIMIT ON A PER LINE BASIS—Continued

[As required in § 63.5865(b), in order to comply with a lbs/ton organic HAP emissions limit for continuous lamination lines and continuous casting lines you must determine the data in the following table:]

For each line where the wet- out area . . .	And the oven . . .	You must determine . . .
		iv. Annual controlled oven organic HAP emissions, v. The capture efficiency of the wet-out area enclosure, vi. The capture efficiency of the oven, vii. The destruction efficiency of the add-on control device, and viii. The amount of neat resin plus and neat gel coat plus applied.
6. Has an enclosure that is a PTE, and the captured organic HAP emissions are controlled by add-on control device.	a. Is controlled by an add-on control device ...	i. That the wet-out area enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE, ii. The capture efficiency of the oven, iii. Inlet organic HAP emissions to the an add-on control device, and iv. Outlet organic HAP emissions from the add-on control device.

TABLE 13 TO SUBPART WWWW OF PART 63.—APPLICABILITY AND TIMING OF NOTIFICATIONS

[As required in § 63.5905(a), you must determine the applicable notifications and submit them by the dates shown in 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)(4) and (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 emissions limit averaging provisions.	A Notification of Compliance Status as specified in § 63.9(h).	No later than 1 year plus 30 days after your facility's compliance date.
5. Is complying with organic HAP content limits, application equipment requirements, or organic HAP emissions limit other than organic HAP emissions limit averaging.	A Notification of Compliance Status as specified in § 63.9(h).	No later than 30 calendar days after your facility's compliance date.
6. Is complying by using an add-on control device.	a. 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 CMS performance evaluation as specified in § 63.9(g).	The date of submission of 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 CMS performance evaluation.

TABLE 14 TO SUBPART WWWW OF PART 63.—REQUIREMENTS FOR REPORTS

[As required in § 63.5910(a), (b), (g), and (h), you must submit reports on the schedule shown in the following table:]

You must submit a(n)	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. A statement that there were no deviations during that reporting period if there were no deviations from any emission limitations (emission limit, operating limit, opacity limit, and visible emission limit) that apply to you and there were no deviations from the requirements for work practice standards in Table 4 to this subpart that apply to you. If there were no periods during which the CMS, including CEMS, and operating parameter monitoring systems, was out of control as specified in § 63.8(c)(7), the report must also contain a statement that there were no periods during which the CMS was out of control during the reporting period.	Semiannually according to the requirements in § 63.5910(b).

TABLE 14 TO SUBPART WWWW OF PART 63.—REQUIREMENTS FOR REPORTS—Continued

[As required in § 63.5910(a), (b), (g), and (h), you must submit reports on the schedule shown in the following table:]

You must submit a(n)	The report must contain . . .	You must submit the report . . .
	b. The information in § 63.5910(d) if you have a deviation from any emission limitation (emission limit, operating limit, or work practice standard) during the reporting period. If there were periods during which the CMS, including CEMS, and operating parameter monitoring systems, was out of control, as specified in § 63.8(c)(7), the report must contain the information in § 63.5910(e).	Semiannually according to the requirements in § 63.5910(b).
	c. The information in § 63.10(d)(5)(i) if you had a startup, shutdown or malfunction during the reporting period, and you took actions consistent with your startup, shutdown, and malfunction plan.	Semiannually according to the requirements in § 63.5910(b).
2. An immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your startup, shutdown, and malfunction plan.	a. Actions taken for the event	By fax or telephone within 2 working days after starting actions inconsistent with the plan.
	b. The information in § 63.10(d)(5)(ii)	By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority. (§ 63.10(d)(5)(ii)).

TABLE 15 TO SUBPART WWWW OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS (SUBPART A) TO SUBPART WWWW OF PART 63

[As specified in § 63.5925, the parts of the General Provisions which apply to you are shown in the following table:]

The general provisions reference . . .	That addresses . . .	And applies to subpart WWWW of part 63 . . .	Subject to the following additional information . . .
§ 63.1(a)(1)	General applicability of the general provisions.	Yes	Additional terms defined in subpart WWWW of Part 63, when overlap between subparts A and WWWW of Part 63 of this part, subpart WWWW of Part 63 takes precedence.
§ 63.1(a)(2) through (4)	General applicability of the general provisions.	Yes.	
§ 63.1(a)(5)	Reserved	No.	
§ 63.1(a)(6)	General applicability of the general provisions.	Yes.	
§ 63.1(a)(7) through (9)	Reserved	No.	
§ 63.1(a)(10) through (14)	General applicability of the general provisions.	Yes.	
§ 63.1(b)(1)	Initial applicability determination	Yes	Subpart WWWW of Part 63 clarifies the applicability in§§ 63.5780 and 63.5785.
§ 63.1(b)(2)	Reserved	No..	
§ 63.1(b)(3)	Record of the applicability determination	Yes.	
§ 63.1(c)(1)	Applicability of this part after a relevant standard has been set under this part.	Yes	Subpart WWWW of Part 63 clarifies the applicability of each paragraph of subpart A to sources subject to subpart WWWW of Part 63.
§ 63.1(c)(2)	Title V operating permit requirement	Yes	All major affected sources are required to obtain a title V operating permit. Area sources are not subject to subpart WWWW of Part 63.
§ 63.1(c)(3) and (4)	Reserved	No.	
§ 63.1(c)(5)	Notification requirements for an area source that increases HAP emissions to major source levels.	Yes.	
§ 63.1(d)	Reserved	No.	
§ 63.1(e)	Applicability of permit program before a relevant standard has been set under this part.	Yes.	
§ 63.2	Definitions	Yes	Subpart WWWW of Part 63 defines terms in § 63.5935. When overlap between subparts A and WWWW of Part 63 occurs, you must comply with the subpart WWWW of Part 63 definitions, which take precedence over the subpart A definitions.

TABLE 15 TO SUBPART WWWW OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS (SUBPART A) TO SUBPART WWWW OF PART 63—Continued

[As specified in § 63.5925, the parts of the General Provisions which apply to you are shown in the following table:]

The general provisions reference . . .	That addresses . . .	And applies to subpart WWWW of part 63 . . .	Subject to the following additional information . . .
§ 63.3	Units and abbreviations	Yes	Other units and abbreviations used in subpart WWWW of Part 63 are defined in subpart WWWW of Part 63.
§ 63.4	Prohibited activities and circumvention	Yes	§ 63.4(a)(3) through (5) is reserved and does not apply.
§ 63.5(a)(1) and (2)	Applicability of construction and reconstruction.	Yes	Existing facilities do not become reconstructed under subpart WWWW of Part 63.
§ 63.5(b)(1)	Relevant standards for new sources upon construction.	Yes	Existing facilities do not become reconstructed under subpart WWWW of Part 63.
§ 63.5(b)(2)	Reserved	No.	
§ 63.5(b)(3)	New construction/reconstruction	Yes	Existing facilities do not become reconstructed under subpart WWWW of Part 63.
§ 63.5(b)(4)	Construction/reconstruction notification	Yes	Existing facilities do not become reconstructed under subpart WWWW of Part 63.
§ 63.5(b)(5)	Reserved	No.	
§ 63.5(b)(6)	Equipment addition or process change	Yes	Existing facilities do not become reconstructed under subpart WWWW of Part 63.
§ 63.5(c)	Reserved	No.	
§ 63.5(d)(1)	General application for approval of construction or reconstruction.	Yes	Existing facilities do not become reconstructed under subpart WWWW of Part 63.
§ 63.5(d)(2)	Application for approval of construction	Yes.	
§ 63.5(d)(3)	Application for approval of reconstruction	No.	
§ 63.5(d)(4)	Additional information	Yes.	
§ 63.5(e)(1) through (5)	Approval of construction or reconstruction.	Yes.	
§ 63.5(f)(1) and (2)	Approval of construction or reconstruction based on prior State preconstruction review.	Yes.	
§ 63.6(a)(1)	Applicability of compliance with standards and maintenance requirements.	Yes.	
§ 63.6(a)(2)	Applicability of area sources that increase HAP emissions to become major sources.	Yes.	
§ 63.6(b)(1) through (5)	Compliance dates for new and reconstructed sources.	Yes	Subpart WWWW of Part 63 clarifies compliance dates in § 63.5800.
§ 63.6(b)(6)	Reserved	No.	
§ 63.6(b)(7)	Compliance dates for new operations or equipment that cause an area source to become a major source.	Yes	New operations at an existing facility are not subject to new source standards.
§ 63.6(c)(1) and (2)	Compliance dates for existing sources	Yes	Subpart WWWW of Part 63 clarifies compliance dates in § 63.5800.
§ 63.6(c)(3) and (4)	Reserved	No.	
§ 63.6(c)(5)	Compliance dates for existing area sources that become major.	Yes	Subpart WWWW of Part 63 clarifies compliance dates in § 63.5800.
§ 63.6(d)	Reserved	No.	
§ 63.6(e)(1) and (2)	Operation & maintenance requirements	Yes.	
§ 63.6(e)(3)	Startup, shutdown, and malfunction plan and recordkeeping.	Yes	Subpart WWWW of Part 63 requires a startup, shutdown, and malfunction plan only for sources using add-on controls.
§ 63.6(f)(1)	Compliance except during periods of startup, shutdown, and malfunction.	No	Subpart WWWW of Part 63 requires compliance during periods of startup, shutdown, and malfunction, except startup, shutdown, and malfunctions for sources using add-on controls.
§ 63.6(f)(2) and (3)	Methods for determining compliance	Yes.	
§ 63.6(g)(1) through (3)	Alternative standard	Yes.	
§ 63.6(h)	Opacity and visible emission Standards	No	Subpart WWWW of Part 63 does not contain opacity or visible emission standards.
. § 63.6(i)(1) through (14)	Compliance extensions	Yes.	

TABLE 15 TO SUBPART WWWW OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS (SUBPART A) TO SUBPART WWWW OF PART 63—Continued

[As specified in § 63.5925, the parts of the General Provisions which apply to you are shown in the following table:]

The general provisions reference . . .	That addresses . . .	And applies to subpart WWWW of part 63 . . .	Subject to the following additional information . . .
§ 63.6(i)(15)	Reserved	No.	
§ 63.6(i)(16)	Compliance extensions	Yes.	
§ 63.6(j)	Presidential compliance exemption	Yes.	
§ 63.7(a)(1)	Applicability of performance testing requirements.	Yes.	
§ 63.7(a)(2)	Performance test dates	No	Subpart WWWW of Part 63initial compliance requirements are in § 63.5840.
§ 63.7(a)(3)	CAA Section 114 authority	Yes.	
§ 63.7(b)(1)	Notification of performance test	Yes.	
§ 63.7(b)(2)	Notification rescheduled performance test.	Yes.	
§ 63.7(c)	Quality assurance program, including test plan.	Yes	Except that the test plan must be submitted with the notification of the performance test.
§ 63.7(d)	Performance testing facilities	Yes.	
§ 63.7(e)	Conditions for conducting performance tests.	Yes	Performance test requirements are contained in § 63.5850. Additional requirements for conducting performance tests for continuous lamination/casting are included in § 63.5870.
§ 63.7(f)	Use of alternative test method	Yes.	
§ 63.7(g)	Performance test data analysis, recordkeeping, and reporting.	Yes.	
§ 63.7(h)	Waiver of performance tests	Yes.	
§ 63.8(a)(1) and (2)	Applicability of monitoring requirements	Yes.	
§ 63.8(a)(3)	Reserved	No.	
§ 63.8(a)(4)	Monitoring requirements when using flares.	Yes.	
§ 63.8(b)(1)	Conduct of monitoring exceptions	Yes.	
§ 63.8(b)(2) and (3)	Multiple effluents and multiple monitoring systems.	Yes.	
§ 63.8(c)(1)	Compliance with CMS operation and maintenance requirements.	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(c)(2) and (3)	Monitoring system installation	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(c)(4)	CMS requirements	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(c)(5)	Continuous Opacity Monitoring System (COMS) minimum procedures.	No	Subpart WWWW of Part 63 does not contain opacity standards.
§ 63.8(c)(6) through (8)	CMS calibration and periods CMS is out of control.	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(d)	CMS quality control program, including test plan and all previous versions.	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(e)(1)	Performance evaluation of CMS	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(e)(2)	Notification of performance evaluation	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(e)(3) and (4)	CMS requirements/alternatives	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(e)(5)(i)	Reporting performance evaluation results	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(e)(5)(ii)	Results of COMS performance evaluation.	No	Subpart WWWW of Part 63 does not contain opacity standards.
§ 63.8(f)(1) through (3)	Use of an alternative monitoring method	Yes.	
§ 63.8(f)(4)	Request to use an alternative monitoring method.	Yes.	
§ 63.8(f)(5)	Approval of request to use an alternative monitoring method.	Yes.	

TABLE 15 TO SUBPART WWWW OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS (SUBPART A) TO SUBPART WWWW OF PART 63—Continued

[As specified in § 63.5925, the parts of the General Provisions which apply to you are shown in the following table:]

The general provisions reference . . .	That addresses . . .	And applies to subpart WWWW of part 63 . . .	Subject to the following additional information . . .
§ 63.8(f)(6)	Request for alternative to relative accuracy test and associated records.	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(g)(1) through (5)	Data reduction	Yes.	
§ 63.9(a)(1) through (4)	Notification requirements and general information.	Yes.	
§ 63.9(b)(1)	Initial notification applicability	Yes.	
§ 63.9(b)(2)	Notification for affected source with initial startup before effective date of standard.	Yes.	
§ 63.9(b)(3)	Reserved	No.	
§ 63.9(b)(4)(i)	Notification for a new or reconstructed major affected source with initial startup after effective date for which an application for approval of construction or reconstruction is required.	Yes.	
§ 63.9(b)(4)(ii) through (iv)	Reserved	No.	
§ 63.9(b)(4)(v)	Notification for a new or reconstructed major affected source with initial startup after effective date for which an application for approval of construction or reconstruction is required.	Yes	Existing facilities do not become reconstructed under subpart WWWW of Part 63.
§ 63.9(b)(5)	Notification that you are subject to this subpart for new or reconstructed affected source with initial startup after effective date and for which an application for approval of construction or reconstruction is not required.	Yes	Existing facilities do not become reconstructed under subpart WWWW of Part 63.
§ 63.9(c)	Request for compliance extension	Yes.	
§ 63.9(d)	Notification of special compliance requirements for new source.	Yes.	
§ 63.9(e)	Notification of performance test	Yes.	
§ 63.9(f)	Notification of opacity and visible emissions observations.	No	Subpart WWWW of Part 63 does not contain opacity or visible emission standards.
§ 63.9(g)(1)	Additional notification requirements for sources using CMS.	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.9(g)(2)	Notification of compliance with opacity emission standard.	No	Subpart WWWW of Part 63 does not contain opacity emission standards.
§ 63.9(g)(3)	Notification that criterion to continue use of alternative to relative accuracy testing has been exceeded.	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.9(h)(1) through (3)	Notification of compliance status	Yes.	
§ 63.9(h)(4)	Reserved	No.	
§ 63.9(h)(5) and (6)	Notification of compliance status	Yes.	
§ 63.9(i)	Adjustment of submittal deadlines	Yes.	
§ 63.9(j)	Change in information provided	Yes.	
§ 63.10(a)	Applicability of recordkeeping and reporting.	Yes.	
§ 63.10(b)(1)	Records retention	Yes.	
§ 63.10(b)(2)(i) through (v)	Records related to startup, shutdown, and malfunction.	Yes	Only applies to facilities that use an add-on control device.
§ 63.10(b)(2)(vi) through (xi)	CMS records, data on performance tests, CMS performance evaluations, measurements necessary to determine conditions of performance tests, and performance evaluations.	Yes.	
§ 63.10(b)(2)(xii)	Record of waiver of recordkeeping and reporting.	Yes.	
§ 63.10(b)(2)(xiii)	Record for alternative to the relative accuracy test.	Yes.	
§ 63.10(b)(2)(xiv)	Records supporting initial notification and notification of compliance status.	Yes.	
§ 63.10(b)(3)	Records for applicability determinations	Yes.	
§ 63.10(c)(1)	CMS records	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.

TABLE 15 TO SUBPART WWWW OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS (SUBPART A) TO SUBPART WWWW OF PART 63—Continued

[As specified in § 63.5925, the parts of the General Provisions which apply to you are shown in the following table:]

The general provisions reference . . .	That addresses . . .	And applies to subpart WWWW of part 63 . . .	Subject to the following additional information . . .
§ 63.10(c)(2) through (4)	Reserved	No.	
§ 63.10(c)(5) through (8)	CMS records	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.10(c)(9)	Reserved	No.	
§ 63.10(c)(10) through (15)	CMS records	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.10(d)(1)	General reporting requirements	Yes.	
§ 63.10(d)(2)	Report of performance test results	Yes.	
§ 63.10(d)(3)	Reporting results of opacity or visible emission observations.	No	Subpart WWWW of Part 63 does not contain opacity or visible emission standards.
§ 63.10(d)(4)	Progress reports as part of extension of compliance.	Yes.	
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports.	Yes	Only applies if you use an add-on control device.
§ 63.10(e)(1) through (3)	Additional reporting requirements for CMS.	Yes	This section applies if you have an add-on control device and elect to use a CEM to demonstrate continuous compliance with an emission limit.
§ 63.10(e)(4)	Reporting COMS data	No	Subpart WWWW of Part 63 does not contain opacity standards.
§ 63.10(f)	Waiver for recordkeeping or reporting	Yes.	
§ 63.11	Control device requirements	Yes	Only applies if you elect to use a flare as a control device.
§ 63.12	State authority and delegations	Yes.	
§ 63.13	Addresses of State air pollution control agencies and EPA Regional Offices.	Yes.	
§ 63.14	Incorporations by reference	Yes.	
§ 63.15	Availability of information and confidentiality.	Yes.	

Appendix A to Subpart WWWW—Test Method for Determining Vapor Suppressant Effectiveness

1. Scope and Application

1.1 *Applicability.* If a facility is using vapor suppressants to reduce hazardous air pollutant (HAP) emissions, the organic HAP emission factor equations in Table 1 to this subpart require that the vapor suppressant effectiveness factor be determined. The vapor suppressant effectiveness factor is then used as one of the inputs into the appropriate organic HAP emission factor equation. The vapor suppressant effectiveness factor test is not intended to quantify overall volatile emissions from a resin, nor to be used as a stand-alone test for emissions determination. This test is designed to evaluate the performance of film forming vapor suppressant resin additives. The results of this test are used only in combination with the organic HAP emissions factor equations in Table 1 to this subpart to generate emission factors.

1.1.1 The open molding process consists of application of resin and reinforcements to the mold surface, followed by a manual rollout process to consolidate the laminate, and the curing stage where the laminate surface is not disturbed. Emission studies have shown that approximately 50 percent to 55 percent of the emissions occur while the resin is being applied to the mold. Vapor suppressants have little effect during this portion of the lamination process, but can have a significant effect during the curing stage. Therefore, if a suppressant is 100 percent effective, the overall emissions from the process would be reduced by 45 percent to 50 percent, representing the emissions generated during the curing stage. In actual practice, vapor suppressant effectiveness will be less than 100 percent and the test results determine the specific effectiveness in terms of the vapor suppressant effectiveness factor. This factor represents the effectiveness of a specific combination of suppressant additive and resin formulation.

1.1.2 A resin manufacturer may supply a molder with a vapor-suppressed resin, and employ this test to provide the molder with the vapor suppressant effectiveness factor for that combination of resin and vapor suppressant. The factor qualifies the effectiveness of the vapor suppressant when the resin is tested in the specific formulation supplied to the molder. The addition of fillers or other diluents by the molder may impact the effectiveness of the vapor suppressant. The formulation, including resin/glass ratio and filler content, used in the test should be similar to the formulation to be used in production. The premise of this method is to compare laminate samples made with vapor suppressant additive and made without the additive. The difference in emissions between the two yields the vapor suppressant effectiveness factor.

1.1.3 The method uses a mass balance determination to establish the relative loss of the volatile component from unsaturated polyester or vinyl ester resins, with and without vapor suppressant additives. The effectiveness of a specific vapor suppressant and resin mixture is determined by comparing the relative volatile weight losses from vapor suppressed and non-suppressed resins. The volatile species are not separately analyzed. While the species contained in the volatile component are not determined, an extended listing of potential monomer that may be contained in unsaturated polyester or vinyl ester resins is provided in Table 1.1. However, most polyester and vinyl ester resin formulations presently used by the composites industry only contain styrene monomer.

TABLE 1.1.—LIST OF MONOMERS POTENTIALLY PRESENT IN UNSATURATED POLYESTER/VINYL ESTER RESINS

Monomer	CAS No.
Styrene	100–42–5.
Vinyl toluene	25013–15–4.
Methyl methacrylate	80–62–6.
Alpha methyl styrene	98–83–9.

TABLE 1.1.—LIST OF MONOMERS POTENTIALLY PRESENT IN UNSATURATED POLYESTER/VINYL ESTER RESINS—Continued

Monomer	CAS No.
Para methyl styrene	Vinyl toluene isomer.
Chlorostyrene	1331–28–8.
Diallyl phthalate	131–17–9.
Other volatile monomers	Various.

2. Summary of Method

2.1 Differences in specific resin and suppressant additive chemistry affect the performance of a vapor suppressant. The purpose of this method is to quantify the effectiveness of a specific combination of vapor suppressant and unsaturated polyester or vinyl ester resin as they are to be used in production. This comparative test quantifies the loss of volatiles from a fiberglass reinforced laminate during the roll-out and curing emission phases, for resins formulated with and without a suppressant additive. A criterion for this method is the testing of a non-vapor suppressed resin system and testing the same resin with a vapor suppressant. The two resins are as identical as possible with the exception of the addition of the suppressant to one. The exact formulation used for the test will be determined by the in-use production requirements. Each formulation of resin, glass, fillers, and additives is developed to meet particular customer and or performance specifications.

2.2 The result of this test is used as an input factor in the organic HAP emissions factor equations in Table 1 to this subpart, which allows these equations to predict emissions from a specific combination of resin and suppressant. This test does not provide an emission rate for the entire lamination process.

3. Definitions and Acronyms

3.1 Definitions

3.1.1 *Vapor suppressant.* An additive that inhibits the evaporation of volatile components in unsaturated polyester or vinyl ester resins.

3.1.2 *Unsaturated polyester resin.* A thermosetting resin commonly used in composites molding.

3.1.3 *Unsaturated vinyl ester resin.* A thermosetting resin used in composites molding for corrosion resistant and high performance applications.

3.1.4 *Laminate.* A combination of fiber reinforcement and a thermoset resin.

3.1.5 *Chopped strand mat.* Glass fiber reinforcement with random fiber orientation.

3.1.6 *Initiator.* A curing agent added to an unsaturated polyester or vinyl ester resin.

3.1.7 *Resin application roller.* A tool used to saturate and compact a wet laminate.

3.1.8 *Gel time.* The time from the addition of initiator to a resin to the state of resin gelation.

3.1.9 *Filled resin system.* A resin, which includes the addition of inert organic or inorganic materials to modify the resin properties, extend the volume and to lower the cost. Fillers include, but are not limited to; mineral particulates; microspheres; or organic particulates. This test is not intended to be used to determine the vapor suppressant effectiveness of a filler.

3.1.10 *Material safety data sheet.* Data supplied by the manufacturer of a chemical product, listing hazardous chemical components, safety precautions, and required personal protection equipment for a specific product.

3.1.11 *Tare(ed).* Reset a balance to zero after a container or object is placed on the balance; that is to subtract the weight of a container or object from the balance reading so as to weigh only the material placed in the container or on the object.

3.1.12 *Percent glass.* The specified glass fiber weight content in a laminate. It is usually determined by engineering requirements for the laminate.

3.2 Acronyms:

3.2.1 *VS*—vapor suppressed or vapor suppressant.

3.2.2 *NVS*—non-vapor suppressed.

3.2.3 *VSE*—vapor suppressant effectiveness.

3.2.4 *VSE Factor*—vapor suppressant effectiveness, factor used in the equations in Table 1 to this subpart.

3.2.5 *CSM*—chopped strand mat.

3.2.6 *MSDS*—material safety data sheet.

4. Interferences

There are no identified interferences which affect the results of this test.

5. Safety

Standard laboratory safety procedures should be used when conducting this test. Refer to specific MSDS for handling precautions.

6. Equipment and Supplies

Note: Mention of trade names or specific products or suppliers does not constitute an endorsement by the Environmental Protection Agency.

6.1 Required Equipment.

6.1.1 Balance enclosure.[1]

6.1.2 Two (2) laboratory balances—accurate to ±0.01g.[2]

6.1.3 Stop watch or balance data recording output to data logger with accuracy ±1 second.[3]

6.1.4 Thermometer—accurate to ±2.0°F(±1.0°C).[4]

6.1.5 A lipped pan large enough to hold the cut glass without coming into contact with the vertical sides, *e.g.* a pizza pan.[5]

6.1.6 Mylar film sufficient to cover the bottom of the pan.[6]

6.1.7 Tape to keep the Mylar from shifting in the bottom of the pan.[7]

6.1.8 Plastic tri-corner beakers of equivalent—250 ml to 400 ml capacity.[8]

6.1.9 Eye dropper or pipette.[9]

6.1.10 Disposable resin application roller, 3⁄16″–3⁄4″ diameter × 3″–6″ roller length.[10]

6.1.11 Hygrometer or psychrometer[11] accurate to ±5 percent

6.1.12 Insulating board, (Teflon, cardboard, foam board etc.) to prevent the balance from becoming a heat sink.[12]

6.2 Optional Equipment.

6.2.1 Laboratory balance—accurate to ±.01g with digital output, such as an RS–232 bi-directional interface[13] for use with automatic data recording devices.

6.2.2 Computer with recording software configured to link to balance digital output. Must be programmed to record data at the minimum intervals required for manual data acquisition.

6.3 Supplies.

6.3.1 Chopped strand mat—1.5 oz/ft.[2] [14]

7. Reagents and Standards

7.1 *Initiator.* The initiator type, brand, and concentration will be specified by resin manufacturer, or as required by production operation.

7.2 Polyester or vinyl ester resin.

7.3 Vapor suppressant additive.

8. Sample Collection, Preservation, and Storage

This test method involves the immediate recording of data during the roll out and curing phases of the lamination process during each test run. Samples are neither collected, preserved, nor stored.

9. Quality Control

Careful attention to the prescribed test procedure, routing equipment calibration, and replicate testing are the quality control activities for this test method. Refer to the procedures in section 11. A minimum of six test runs of a resin system without a suppressant and six test runs of the same resin with a suppressant shall be performed for each resin and suppressant test combination.

10. Calibration and Standardization

10.1 The laboratory balances, stopwatch, hygrometer and thermometer shall be maintained in a state of calibration prior to testing and thereafter on a scheduled basis as determined by the testing laboratory. This shall be accomplished by using certified calibration standards.

10.2 Calibration records shall be maintained for a period of 3 years.

11. Test Procedure

11.1 Test Set-up.

11.1.1 The laboratory balance is located in an enclosure to prevent fluctuations in balance readings due to localized air movement. The front of enclosure is open to permit work activity, but positioned so that local airflow will not effect balance readings. The ambient temperature is determined by suspending the thermometer at a point inside the enclosure.

11.1.2 The bottom of the aluminum pan is covered with the Mylar film. The film is held in position with tape or by friction between the pan and the film.

11.1.3 The resin and pan are brought to room temperature. This test temperature must be between 70°F and 80°F. The testing temperature cannot vary more than ±2°F during the measurement of test runs. Temperature shall be recorded at the same time weight is recorded on suppressed and non-suppressed test data sheets, shown in Table 17.1.

11.1.4 The relative humidity may not change more than ±15 percent during the test runs. This is determined by recording the relative humidity in the vicinity of the test chamber at the beginning and end of an individual test run. This data is recorded on the test data sheets shown in Table 17.1.

11.1.5 Two plies of nominal 1.5 oz/ft^2 chopped strand mat (CSM) are cut into a square or rectangle with the minimum surface area of 60 square inches (*i.e.* a square with a side dimension of 7.75 inches).

11.1.6 The appropriate resin application roller is readily available.

11.2 Resin Gel Time/Initiator Percentage

11.2.1 Previous testing has indicated that resin gel time influences the emissions from composite production. The testing indicated that longer the gel times led to higher emissions. There are a number of factors that influence gel time including initiator type, initiator brand, initiator level, temperature and resin additives. Under actual usage conditions a molder will adjust the initiator to meet a gel time requirement. In this test procedure, the vapor suppressed and non-vapor suppressed resin systems will be adjusted to the same gel time by selecting the appropriate initiator level for each.

11.2.2 All test runs within a test will be processed in a manner that produces the same resin gel time ±2 minutes. To facilitate the resin mixing procedure, master batches of resin and resin plus vapor suppressant of resin are prepared. These resin master batches will have all of the required ingredients except initiator; this includes filler for filled systems. The gel times for the tests are conducted using the master batch and adjustments to meet gel time requirements shall be made to the master batch before emission testing is conducted. Test temperatures must be maintained within the required range, during gel time testing. Further gel time testing is not required after the non-vapor suppressed and vapor suppressed master batches are established with gel times within ±2 minutes. A sufficient quantity of each resin should be prepared to allow for additional test specimens in the event one or more test fails to meet the data acceptance criteria discussed in Section 11.5 and shown in Table 17.2.

11.2.3 The specific brand of initiator and the nominal percentage level recommended by the resin manufacturer will be indicated on the resin certificate of analysis [15]; or, if a unique gel time is required in a production laminate, initiator brand and percentage will be determined by that specific requirement.

11.2.4 Examples:

11.2.4.1 The resin for a test run is specified as having a 15-minute cup gel time at 77°F using Brand X initiator at 1.5 percent by weight. The non-suppressed control resin has a 15-minute gel time. The suppressed resin has a gel time of 17-minutes. An initiator level of 1.5 percent would be selected for the both the non-suppressed and the suppressed test samples.

11.2.4.2 Based on a specific production requirement, a resin is processed in production using 2.25 percent of Brand Y initiator, which produces a 20-minute gel time. This initiator at level of 2.25 percent produces a 20 minute gel time for the non-suppressed control resin, but yields a 25-minute gel time for the suppressed resin sample. The suppressed resin is retested at 2.50 percent initiator and produces a 21-minute gel time. The initiator levels of 2.25 percent and 2.50 percent respectively would yield gel times within ±2 minutes.

11.3 Test Run Procedure for Unfilled Resin (see the data sheet shown in Table 17.1).

11.3.1 The insulating board is placed on the balance.

11.3.2 The aluminum pan with attached Mylar film is placed on the balance, and the balance is tared (weight reading set to zero with the plate on the balance.)

11.3.3 Place two plies of 1.5 oz. CSM on the balance and record the weight (glass weight).

11.3.4 The resin beaker and stirring rod are put on the second balance and tared.

11.3.5 The required resin weight and initiator weight are calculated (refer to calculation formulas in 12.2).

11.3.6 The disposable resin application roller is placed on the edge of the plate.

11.3.7 The balance is tared, with the aluminum pan, Mylar film, glass mat, and resin application roller on the balance pan.

11.3.8 Resin is weighed into a beaker, as calculated, using the second balance. The mixing stick should be tared with the beaker weight.

11.3.9 Initiator is weighed into the resin, as calculated, using an eyedropper or a pipette, and the combination is mixed.

11.3.10 Initiated resin is poured on chopped strand mat in a pe-determined pattern (see Figure 11.6).

11.3.11 A stopwatch is started from zero.

11.3.12 The initial laminate weight is recorded.

11.3.13 The plate is removed from balance to enable roll-out of the laminate.

11.3.14 The wet laminate is rolled with the resin application roller to completely distribute the resin, saturate the chopped strand mat, and eliminate air voids. Roll-out time should be in the range of 2 to 3[16] minutes and vary less than ±10 percent of the average time required for the complete set of six suppressed and six non-suppressed runs.

11.3.15 Record the rollout end time (time from start to completion of rollout).

11.3.16 Place the resin application roller on the edge of the plate when rollout is completed.

11.3.17 Place the plate back on the balance pan. Immediately record the weight.

11.3.18 For the first test in a series of six tests, weight is recorded every 5-minute interval (suppressed and non-suppressed). The end of the test occurs when three consecutive equal weights are recorded or a weight gain is observed (the last weight before the increased weight is the end of test weight). For the remaining five tests in the series, after the initial weights are taken, the next weight is recorded 30 minutes before the end of the test, as suggested by the results from the first test. It is likely that the time to reach the end point of a suppressed resin test will be shorter than the time required to complete a non-suppressed test. Therefore, the time to start taking data manually may be different for suppressed and non-suppressed resins.

11.4 Test Run Procedures for Filled Resin Systems [17] Note that the procedure for filled systems differs from the procedure for unfilled systems. With filled systems, resin is applied to one ply of the CSM and the second ply is placed on top of the resin.

11.4.1 The insulating board is placed on the balance.

11.4.2 The aluminum pan with attached Mylar film is placed on the balance, and the balance is tared (weight reading set to zero with the plate on the balance.)

11.4.3 Place two plies of 1.5 oz. CSM on the balance and record the weight (glass weight).

11.4.4 Remove the top ply of fiberglass and record its weight (weight of 1st layer of glass).

11.4.5 The required resin weight and initiator weight are calculated (refer to calculation formulas in 12.2). Calculate the weight of filled resin and initiator based on the 2 layers of fiberglass.

11.4.6 The resin beaker and stirring rod are put on the second balance and tared.

11.4.7 A disposable resin application roller is placed on the edge of the plate.

11.4.8 The balance is tared, with the aluminum pan, Mylar film, glass mat, and resin application roller on the balance pan.

11.4.9 Resin is weighed into the beaker, as calculated, using the second balance. The mixing stick should be tared with the beaker weight.

11.4.10 Initiator is weighed into the resin, as calculated, using an eyedropper or a pipette, and the combination is mixed.

11.4.11 Initiated resin is poured on the single ply of CSM in a pre-determined pattern. Refer to Figure 11.6.

11.4.12 A stopwatch is started from zero.

11.4.13 Record the weight of the resin ans single ply of CSM (L_1). The initial laminate weight equals L_1 plus the weight of second glass layer.

11.4.14 Replace the second layer of fiberglass.

11.4.15 Remove the plate from the balance to allow roll-out of the laminate.

11.4.16 Roll the wet laminate with the resin application roller to completely distribute the resin, saturate the chopped strand mat, and eliminate air voids. Roll-out time should be in the range of 2 to 3[16] minutes and vary less than ± 10 percent of the average time required for the complete set of six suppressed and six non-suppressed runs.

11.4.17 Record the roll-out end time (time from start to completion of rollout).

11.4.18 Place the resin application roller on the edge of the plate when rollout is completed.

11.4.19 Place the plate back on the balance pan. The initial weight is recorded immediately.

11.4.20 For the first test run in a series of six, weight is recorded at every 5-minute interval (suppressed and non-suppressed). The end of the test occurs when three consecutive equal weights are recorded or a weight gain is observed (the last weight before the increased weight is the end of test weight). For the remaining five tests in the series, after the initial weights are taken, the next weight is recorded 30 minutes before the end of the test, as suggested by the results from the first test. It is likely that the time to reach the end point of a suppressed resin test will be shorter than the time required to complete a non-suppressed test. Therefore, the time to start taking data manually may be different for suppressed and non-suppressed resins.

11.5 Data Acceptance Criteria:

11.5.1 A test set is designed as twelve individual test runs using the same resin, initiator, and gel time, six of the test runs use the resin non-vapor suppressed and the other six use it vapor suppressed.

11.5.2 If a test run falls outside any of the time, temperature, weight or humidity variation requirements, it must be discarded and run again.

11.5.3 The laminate roll out time for each individual test run must vary less than ± 10 percent of the average time required for the complete set of six suppressed and six non-suppressed runs.

11.5.4 Test temperature for each test run must be maintained within ±2°F and the average must be between 70° and 80°F. Refer to 11.1.3.

11.5.5 The difference in the amount of resin for each run must be within ±10 percent of the average weight for the complete set of six suppressed and six non-suppressed runs.

11.5.6 The relative humidity from each test run must be within ±15 percent of the average humidity for the complete set of six suppressed and six non-suppressed tests. Refer to 11.1.4

11.5.7 The glass content for each test set must be within ±10 percent of the average resin-to-/glass ratio for the complete set of six suppressed and six non-suppressed runs. Refer to 12.2).

11.5.8 The filler content for each test of a test set must be within ±5 percent of the average filler content for the complete set of six suppressed and six non-suppressed runs. Refer to 12.2.

11.6 Resin Application Pour Pattern:

11.6.1 To facilitate the distribution of resin across the chopped strand mat, and to provide consistency from test to test, a uniform pour pattern should be used. A typical pour pattern is shown below:

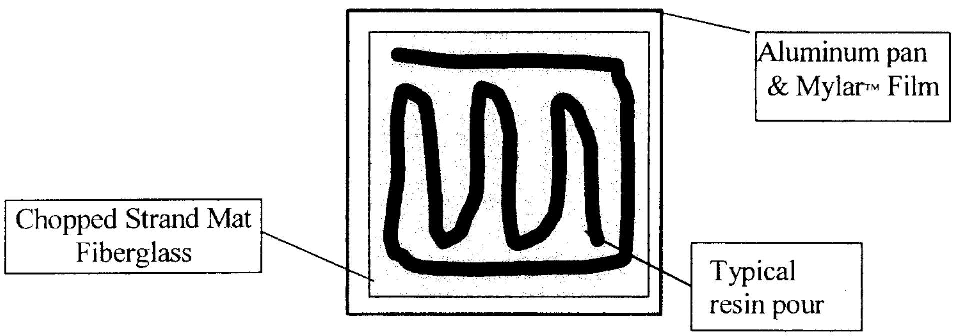

Figure 11.6 Resin Distribution Diagram

11.6.2 The resin is to be evenly distributed across the entire surface of the chopped strand mat using the resin application roller to achieve a wet look across the surface of the laminate. Pushing excess resin off the reinforcement and onto the Mylar sheet should be avoided. No resin is to be pushed more than ½ inch beyond the edge of the glass mat. If excess resin is pushed further from the glass mat, it will void the test run. As part of this process, typical visible air voids are to be eliminated by the rollout process. If the pour pattern is different from the above, it must be recorded and attached to test data sheet 17.1.

12. Data Analysis and Calculations

12.1 Data Analysis:

This test method requires a simple mass balance calculation, no special data analysis is necessary.

12.2 Calculations:

12.2.1 The target glass content (percent) for unfilled resin systems is determined from the specific production parameters being evaluated. In absence of any specific production requirements the target may be set at the tester's discretion.

12.2.2 Glass content determination (expressed as a per cent):

% Glass = Glass wt(g)/(Glass wt(g) + Resin weight (g))

12.2.3 Weight of resin required:

Resin weight required = (Glass wt (g)/% glass)—Glass wt (g)

12.2.4 Filled resin formulation determination for filled resin systems (*e.g.* >30 percent filler by weight for a particulate filler, or >1 percent by weight for a lightweight filler, such as hollow microspheres):

% Resin content = resin weight(g)/(resin weight(g) + glass weight(g) + filler weight(g))

% Glass content = glass weight(g)/(resin weight(g) + glass weight(g) + filler weight(g))

Filler content = filler weight(g)/(resin weight(g) + glass weight(g) + filler weight(g))

12.2.5 Initiator weight determination:

Initiator weight (g) = Resin weight(g) × Initiator %

12.2.6 Emission weight loss determination:

Emissions weight loss (g) = Initial resin weight (g) − Final resin weight (g)

12.2.7 % Emission weight loss:

% Emission Weight Loss = (Emission weight loss (g) Initial resin weight (g) × 100

12.2.8 Average % Emission Weight Loss (assuming six test runs):

$$\text{Average \% Emission Weight Loss} = \sum_{i}^{N=6}\left(\text{\% Emission Weight Loss}_i\right)/6$$

12.2.9 VSE Factor calculation:

VSE Factor = 1 − (Average % VS Emission Weight Loss/Average NVS Emission Weight Loss)

TABLE 12.1.—EXAMPLE CALCULATION

Test #	% VS weight loss	% NVS weight loss
1	6.87	10.86
2	6.76	11.23
3	5.80	12.02
4	5.34	11.70
5	6.11	11.91
6	6.61	10.63
Average Weight Loss	6.25	11.39
VSE Factor	....	0.4

VSE Factor = 0.45

VSE Factor is used as input into the appropriate equation in Table 1 to this subpart.

Example from Table 1 to this subpart:

Manual Resin Application, 35 percent HAP resin, VSE Factor of 0.45

HAP Emissions with vapor suppresants = $((0.286 \times \%HAP) - 0.0529) \times 2000 \times (1 - (0.5 \times \text{VSE factor}))$

HAP Emissions with vapor suppresants = $((0.286 \times .35) - 0.0529) \times 2000 \times (1 - (0.5 \times .45))$

HAP Emissions with vapor suppresants = 73 pounds of HAP emissions per ton of resin.

13. Method Performance

13.1 Bias:

The bias of this test method has not been determined.

13.2 Precision Testing

13.2.1 Subsequent to the initial development of this test protocol by the Composites Fabricators Association, a series of tests were conducted in three different laboratory facilities. The purpose of this round robin testing was to verify the precision of the test method in various laboratories. Each laboratory received a sample of an orthophthalic polyester resin from the same production batch, containing 48 per cent styrene by weight. Each testing site was also provided with the same vapor suppressant additive. The suppressant manufacturer specified the percentage level of suppressant additive. The resin manufacturer specified the type and level of initiator required to produce a 20 minute gel time. The target glass content was 30 percent by weight.

13.2.2 Each laboratory independently conducted the VSE test according to this method. A summary of the results is included in Table 13.1.

TABLE 13.1.—ROUND ROBIN TESTING RESULTS

	Test Lab 1		Test Lab 2		Test Lab 3	
	NVS	VS	NVS	S	NVS	VS
Average percent WT Loss	4.24	1.15	4.69	1.84	5.73	1.61
Standard Deviation	0.095	0.060	0.002	0.002	0.020	0.003
VSE Factor	....	0.730	....	0.607	....	0.720

13.3 Comparison to EPA Reference Methods This test has no corresponding EPA reference method.

14. Pollution Prevention

The sample size used in this method produces a negligible emission of HAP, and has an insignificant impact upon the atmosphere.

15. Waste Management

The spent and waste materials generated during this test are disposed according to required facility procedures, and waste management recommendations on the corresponding material safety data sheets.

16. References and footnotes

16.1 Footnotes:

[1] Balance Enclosure—The purpose of the balance enclosure is to prevent localized airflow from adversely affecting the laboratory balance. The enclosure may be a simple three-sided box with a top and an open face. The configuration of the enclosure is secondary to the purpose of providing a stable and steady balance reading, free from the effects of airflow, for accurate measurements. The enclosure can be fabricated locally. A typical enclosure is shown in Figure 17.1.

[2] Laboratory Balance—Ohaus Precision Standard Series P/N TS400D or equivalent—Paul N. Gardner Co. 316 NE 1st St. Pompano Beach, FL 33060 or other suppliers.

[3] Stop Watch—Local supply.

[4] Thermometer—Mercury thermometer—ASTM No. 21C or equivalent; Digital thermometer—P/N TH–33033 or equivalent—Paul N. Gardner Co. 316 NE 1st St. Pompano Beach, FL 33060 or other suppliers.

[5] Aluminum Pan—Local supply.

[6] Mylar—Local supply.

[7] Double Sided Tape—3M Double Stick Tape or equivalent, local supply.

[8] Laboratory Beakers—250 to 400ml capacity—Local laboratory supply.

[9] Eye Dropper or Pipette—Local laboratory supply.

[10] Disposable Resin Application Roller Source—Wire Handle Roller P/N 205–050–300 or Plastic Handle Roller P/N 215–050–300 or equivalent; ES Manufacturing Inc., 2500 26st Ave. North, St. Petersburg, FL 33713, *www.esmfg.com,* or other source. Refer to Figure 17.3.

[11] Hygrometer or Psychrometer—Model# THWD–1, or equivalent—Part # 975765 by Amprobe Instrument, 630 Merrick Road, P.O. Box 329, Lynbrook, NY 11563, 516–593–5600

[12] Insulating Board (Teflon, cardboard, foam board etc.)—Local supply.

[13] Laboratory Balance With Digital Output—Ohaus Precision Standard Series P/N TS120S or equivalent—Paul N. Gardner Co. 316 NE 1st St. Pompano Beach, FL 33060 or other suppliers.

[14] Chopped Strand Mat—1.5 oz/ft^2 Sources: Owens Corning Fiberglas—Fiberglas M–723; PPG Industries—ABM HTX; Vetrotex America—M–127 or equivalent.

[15] Certificate of Analysis: Resin gel time, as recorded on the resin certificate of analysis, is measured using a laboratory standard gel time procedure. This procedure typically uses a 100 gram cup sample at 77°F (25°C), a specific type of initiator and a specified percentage.

[16] Roll-out times may vary with resin viscosity or resin additive. The important aspect of this step is to produce the same roll-out time for both the suppressed and non-suppressed samples.

[17] While this test can be used with filled resin systems, the test is not designed to determine the effect of the filler on emissions, but rather to measure the effect of the suppressant additive in the resin system. When evaluating a filled system both the non-vapor suppressed and vapor suppressed samples should be formulated with the same type and level of filler.

16.2 References

1. Phase 1—Baseline Study Hand Lay-up, CFA, 1996

2. CFA Vapor Suppressant Effectiveness Test Development, 4/3/98, correspondence with Dr. Madeleine Strum, EPA, OAQPS

3. CFA Vapor Suppressant Effectiveness Screening Tests, 4/4/98

4. Styrene Suppressant Systems Study, Reichhold Chemical, 11/30/98

5. Evaluation of the CFA's New Proposed Vapor Suppressant Effectiveness Test, Technical Service Request #: ED–01–98, BYK Chemie, 6/3/98

6. Second Evaluation of the CFA's New Proposed Vapor Suppressant Effectiveness Test, Technical Service Request #: ED–02–98, BYK Chemie, 1/26/99

17. Data Sheets and Figures

17.1 This data sheet, or a similar data sheet, is used to record the test data for filled, unfilled, suppressed and non-suppressed tests. If additional time is required, the data sheet may be extended.

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Table 17.1 Test Data Sheet

Test Number			Test Type		
			VS (______)		NVS (_____)
Resin			Filled (_____)		Unfilled (____)
Initiator				Initiator, %	__________
Vapor Suppressant				VS, %	__________
Weight of 2 layers of glass, g	______	Weight of 1st glass layer, g	_______	Weight of 2nd glass layer, g	__________
Initial Resin Weight, (g)			Time (Min.)	Weight g	Temp ^{0}F
Glass content, (%)			55		
Initial Temperature ^{0}F:			60		
Initial Humidity %			65		
Resin Initiator Level, %			70		
Resin gel time, (min.)			75		
Resin filler content, %			80		
Roll out time, (min.)			85		
Time, (min.)	Weight, g	Temp, ^{0}F	90		

Initial			95		
			100		
0			105		
5			110		
10			115		
15			120		
20			125		
25			130		
30			135		
35			140		
40			145		
45			150		
50			155		
Final Time, min.	Final Weight, g.		Final Temp, ^{0}F	Final Humidity, %	

17.2 Data Acceptance Criteria Worksheet: The following worksheet is used to determine the quality of collected data (*i.e.* insure the data collected all meets acceptance criteria)

TABLE 17.2.—DATA ACCEPTANCE CRITERIA WORKSHEET

Test No.	Temperature			Laminate roll out time, min	Relative humidity, %		Resin weight, (g)	Glass content, %	Resin distribution	Meets criteria Y/N
	Min	Max	Delta		Initial	Final				
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										

TABLE 17.2.—DATA ACCEPTANCE CRITERIA WORKSHEET—Continued

Test No.	Temperature			Laminate roll out time, min	Relative humidity, %		Resin weight, (g)	Glass content, %	Resin distribution	Meets criteria Y/N
	Min	Max	Delta		Initial	Final				
12										
Average Criteria			± 2°F	±10% of Average	± 15 of Average	± 15 of Average	± 10% of Avg.	± 10% of Avg.	<½ inch off mat	All Y

17.3 VSE Factor Calculation

TABLE 17.3.—CALCULATIONS WORKSHEET

Vapor suppressed		Non-vapor suppressed	
Test #	% Weight loss	Test #	% Weight loss
Average Weight Loss			
VSE Factor			

VSE Factor = 1—(% Average Weight Loss $_{VS}$/ % Average Weight Loss$_{NVS}$)

17.4 Figures

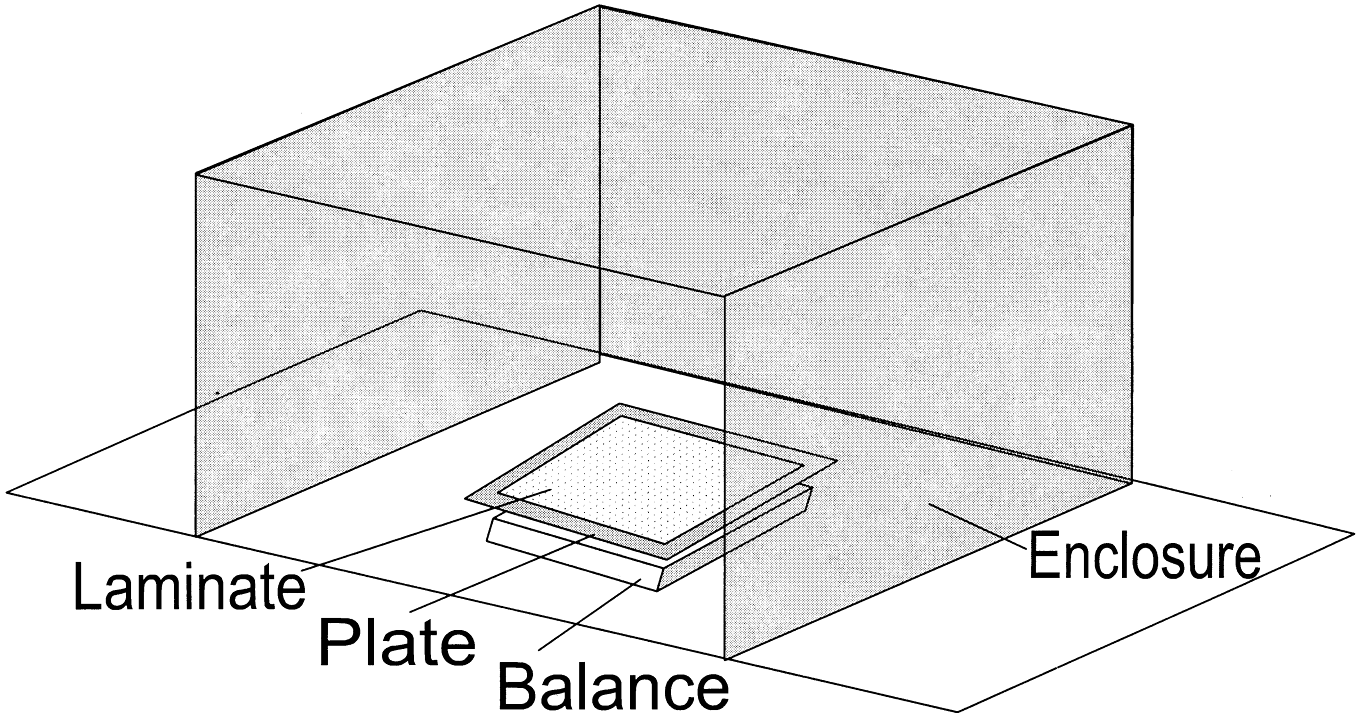

Figure 17.1. Typical Balance Enclosure

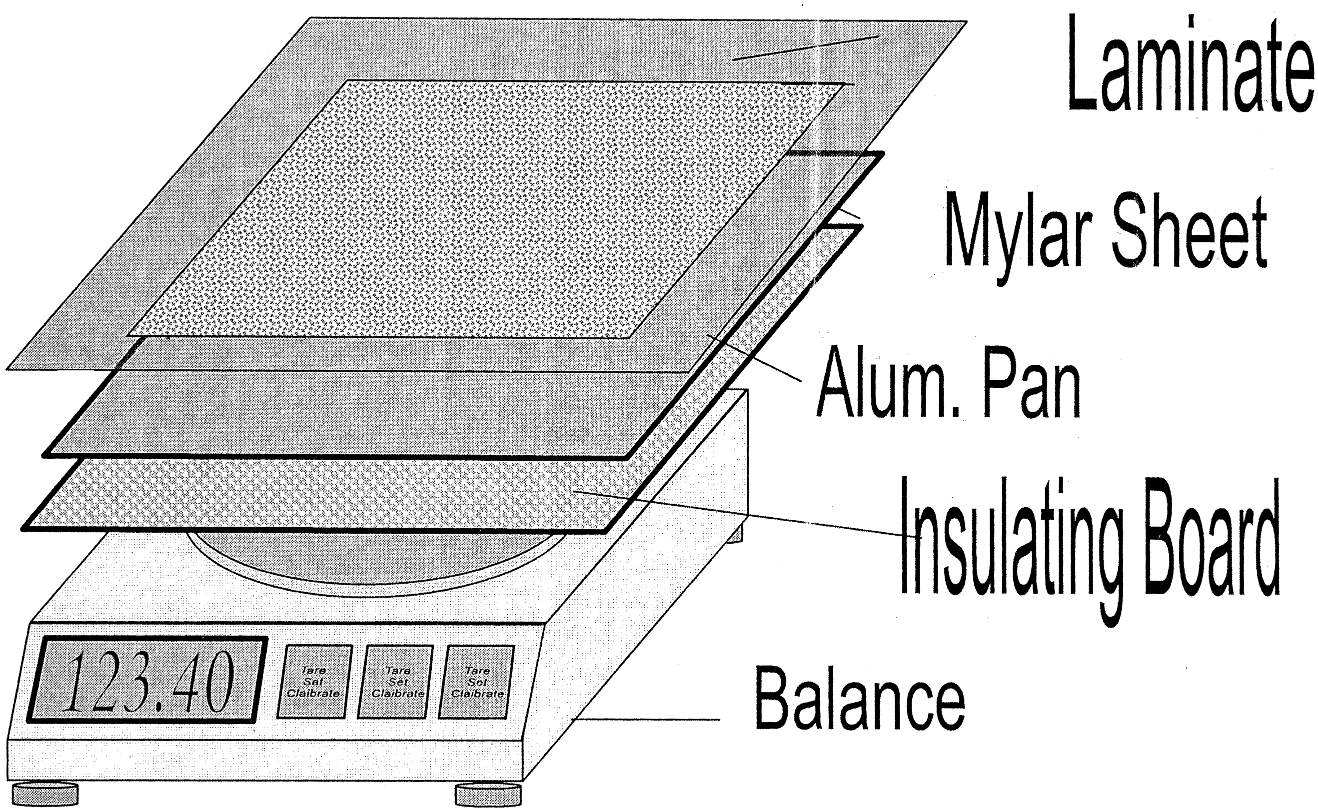

Figure 17.2. Scale, Plate, Insulating Board, Mylar, Laminate Order

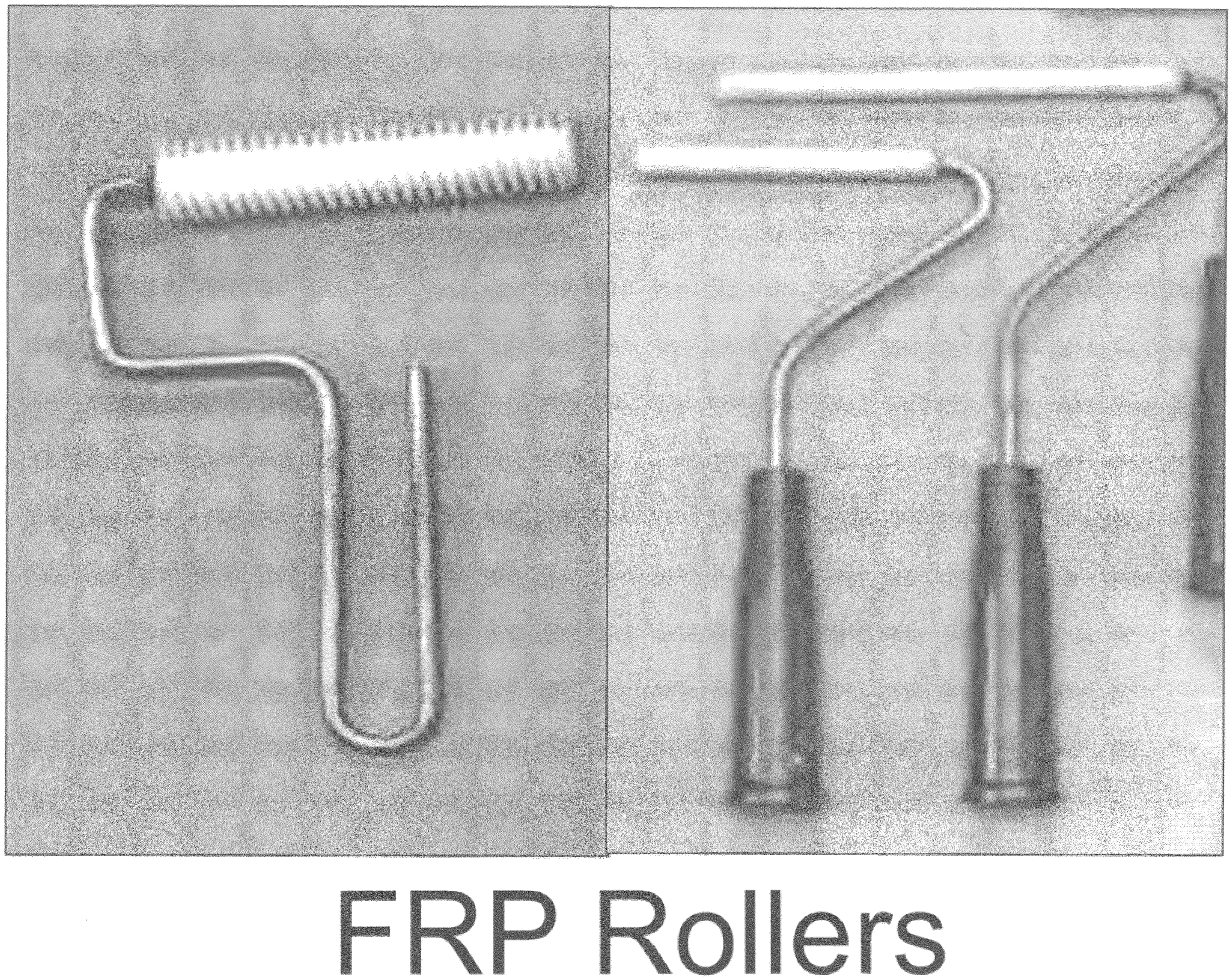

Figure 17.3. Typical FRP Rollers

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