Inspector Checklist for The RPC Maximum Achievable Control Technologies (MACT)

National Emission Standards for Hazardous Air Pollutants (NESHAP): Reinforced Plastic Composites Production
40 CFR Parts 63.5780 – 63.5935 or Subpart WWWW
See Also General Provisions in 40 CFR Part 63

Summary: This subpart establishes national emission and operating limitations for hazardous air pollutants (HAP) emitted from reinforced plastic composites production at major sources of HAP emissions. Requirements to demonstrate initial and continuous compliance with these limitations have also been established.

NOTE: Where possible, this checklist has included the emission calculations for this subpart. Additionally, definitions, applicability of general provisions and all other tables for this subpart are included following the checklist.

Checklist Sections

I. Pre Site Visit Review

1. What should I do before I visit the facility to be inspected?

❑ Review any available information on the facility. This can be found in agency files containing construction and/or operating permits, reports, enforcement actions or by contacting facility personnel.

Facility ID/Permit Number(s):	
Facility Name/Address:	
Facility Contact Name:	
Facility Number/E-mail/Fax:	
Facility Contact Address:	

❑ Review Inspection History

Inspector	Title/Agency	Phone Number	Date of Inspection

❑ Review any agency or facility specific safety procedures.

II. Applicability

2. Is facility subject to the Reinforced Plastic Composites Production NESHAP? 63.5785

❑ The facility operates a reinforced plastic composites production facility that is located at a major source of HAP emissions. ☐ Yes ☐ No ☐NA

❑ The reinforced plastic composites production operation is an operation in which reinforced and/or non-reinforced plastic composites or plastic molding compounds are manufactured using thermoset resins and/or gel coats that contain styrene to produce plastic composites.☐ Yes ☐ No ☐NA

❑ The facility includes cleaning, mixing HAP-containing materials storage, and repair operations associated with the production of plastic composites. ☐ Yes ☐ No ☐NA

- ❑ The facility is not one that only repairs reinforced plastic composites (Repairs include the non-routine manufacture of individual components or parts intended to repair a larger item).
  ☐ Yes ☐ No ☐NA

- ❑ The facility is not a research and development facility as defined in section 112(c)(7) of the Clean Air Act ☐ Yes ☐ No ☐NA

- ❑ The facility reinforced plastic composites operations does not use less than 1.2 tons per year (TPY) of the thermoset resins and gel coats that contain styrene combined. ☐ Yes ☐ No ☐NA

3. If not a major source, what type of records does the facility have to prove its status? 63.1(b)(3) and 63.10(b)(3)

- ❑ Records of the total amount of materials used each month, and, if necessary, the HAP content of each material and the calculation of the total HAP consumed each month.☐ Yes ☐ No ☐NA

- ❑ Records that began 12 months before the source's compliance date. ☐ Yes ☐ No ☐NA

- ❑ Records are kept for 5 years after they are created. ☐ Yes ☐ No ☐NA

4. Is the facility subject to this subpart and/or the fiberglass boats or boat parts? 63.5787

- ❑ The facility has a source that meets the applicability of this subpart, but is not subject to the Boat Manufacturing NESHAP (40 CFR Part 63, Subpart VVVV). If yes, the facility is not subject to this subpart. ☐ Yes ☐ No ☐NA

- ❑ The facility has a source that is subject to Subpart VVVV (Boat Manufacturing) and all the reinforced plastic composites manufactured are used in manufacturing boats. If yes, the facility is not subject to this subpart (Reinforced Plastics Composites) ☐ Yes ☐ No ☐NA

- ❑ The facility is subject to Subpart VVVV (Boat Manufacturing), and also meets the applicability criteria in this subpart (Reinforced Plastics Composites) and produces reinforced plastic composites that are not used in fiberglass boat manufacture at their facility. If yes, the facility is subject to this subpart for all operations associated with the manufacture of reinforced plastic parts that are not used in the fiberglass boat manufacture at their facility, except as noted below.
  ☐ Yes ☐ No ☐ NA

  Note: Facilities potentially subject to both this subpart and Subpart VVVV (Fiberglass Boat Manufacture) may elect to have the operations that are covered by this subpart, covered by Subpart VVVV instead if they can demonstrate that doing so will not result in any organic HAP emissions increase compared to complying with this subpart.

5. Does the facility have affected sources covered by this subpart? 63.5790

- ❑ The affected source consists of all parts the 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 the facility also manufactures.
  ☐ Yes ☐ No ☐ NA

- ❑ The facility has, per the regulations, specifically excluded from any requirements in this subpart: application of mold sealing and release agents, mold stripping and cleaning, repair of parts that the facility 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 (see definitions), 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. ☐ Yes ☐ No ☐ NA

- ❑ The facility has production resins that must meet military specifications are allowed to meet the organic HAP limit contained in that specification. ☐ Yes ☐ No ☐ NA

- ❑ If the military specification exemption is being used, has the facility supplied to the permitting authority the specifications certified as accurate by the military procurement officer (Note: those specifications must state a requirement for a specific resin, or specific resin HAP content. The production resins for which this exemption is used must be applied with non-atomizing resin application equipment unless the facility can demonstrate that is not feasible. The facility must keep a record of the resins for which they are using this exemption.)? ☐ Yes ☐ No ☐ NA

6. Is the reinforced plastic composites production facility a new affected source or an existing affected source? 63.5795

- ❑ The facility is a new affected source because construction of the affected source commenced after August 2, 2001 and no other reinforced plastic composite production affected source exists at this site, or ☐ Yes ☐ No ☐ NA

- ❑ The facility is an existing affected source (i.e., any affected source that is not a new affected source). ☐ Yes ☐ No ☐ NA

III. Calculating HAP Emission Factors (Open Molding & Centrifugal Casting)

7. Does the facility use HAP emissions factors and are they used appropriately? 63.5796

Note: Emissions factors are used to determine compliance with certain organic HAP emissions limits (See Tables 3 and 5 for emissions limits). The facility should provide appropriate documentation of emissions factors and calculations.

- ❑ The facility used the equations in **Table 1** to calculate the emissions factors for each open molding operation and central casting operation. ☐ Yes ☐ No ☐ NA

- ❑ In lieu of equations, the facility used site-specific organic HAP emissions factors to demonstrate compliance, provided that the site-specific factors are incorporated in the facility's air emissions permit and are based on actual facility HAP emissions test data. ☐ Yes ☐ No ☐ NA

- ❑ Did the facility also use the organic HAP emissions factors (calculated using the equations in Table 1) combined with resin and gel coat use data, to calculate their organic HAP emissions. ☐ Yes ☐ No ☐ NA

8. How did the facility determine the organic HAP content of their resins and gel coats? 63.5797

- ❑ In order to determine the organic HAP content of resins and gel coats, the facility has chosen to 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. ☐ Yes ☐ No ☐ NA

- ❑ In relying on manufacturer's information, the facility has followed the following procedures:

    - o 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. ☐ Yes ☐ No ☐ NA

    - o 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. ☐ Yes ☐ No ☐ NA

    - o 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. ☐ Yes ☐ No ☐ NA

- ❑ The facility has the appropriate documentation of the HAP content determination. ☐ Yes ☐ No ☐ NA

9. Is the facility using or manufacturing an application technology (new or existing) in which organic HAP emissions characteristics are not represented by the appropriate equations in Table 1 to this subpart? 63.5798

Note: If a facility wishes 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, then they may use designated procedures described below 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.

- ❑ Did the facility perform an organic HAP emissions test to determine a site-specific organic HAP emissions factor using the test procedures in § 63.5850? ☐ Yes ☐ No ☐ NA

- ❑ Did the facility submit a petition to the Administrator for review of this subpart? Did the petition 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? ☐ Yes ☐ No ☐ NA

- ❑ Was the emission test data 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? ☐ Yes ☐ No ☐ NA

10. Did the facility calculate their organic HAP emissions on a TPY basis for purposes of determining which emissions standards (see 63.5805) apply? 63.5799

❑ The facility is a new facility and prior to startup the facility calculated a weighted average (based on the projected operation for the 12 months prior subsequent to facility startup) organic HAP emissions factor for specified operations [see 63.5805(b) and (d)] on a lbs/ton of resin and gel coat basis, and multiplied the weighted average organic HAP emissions factor by projected resin use over the same period (The facility may also calculate organic HAP emissions factors based on the factors in **Table 1** to this subpart, or they may use any HAP emissions factor approved by EPA, 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).
☐ Yes☐ No ☐ NA

❑ The facility is an existing facility or a new facilities **after** startup and is using one of the following methods:

- o C*alculated 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. Facilities may calculate this organic HAP emissions factor based on the equations in **Table 1** to this subpart, or may use any organic HAP emissions factor approved by the Administrator, such as factors from AP–42, or site-specific organic HAP emissions factors if they are supported by HAP emissions test data.
☐ Yes☐ No ☐ NA

- o *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.
☐ Yes☐ No ☐ NA

❑ The facility is 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 and is not required to calculate or report emissions under this section. Note: Emissions calculation and emission reporting procedures in other sections of this subpart still apply. ☐ Yes ☐ No ☐ NA

Note: 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.

Note: Facilities must calculate organic HAP emissions prior to any add-on control device, and 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, facilities must 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 notes to this subpart present

more information on calculating centrifugal casting organic HAP emissions. The timing and reporting of these calculations are discussed in paragraph (c) of this section.

IV. Compliance Dates and Standards

11. Has the facility met the compliance dates? 63.5800

❑ Did the facility comply with the standards in this subpart by the dates specified in **Table 2** to this subpart? Facilities must demonstrate compliance with the standards by the dates in this table.
☐ Yes ☐ No ☐ NA

❑ If the facility is meeting an organic HAP emissions standard based on a 12-month rolling average, did they collect data on the compliance date in order to demonstrate compliance?
☐ Yes ☐ No ☐ NA

12. Did the facility comply with the applicable standards of this subpart? 63.5805

Note: The facility must meet the applicable requirements as described below in the following items. The facility may elect to comply using any options to meet the standards for open molding/centrifugal casting operations at new and existing sources, continuous lamination/casting operations and pultrusion operations subject to the 60 weight percent organic HAP emissions reduction requirements. The facility must use the procedures described in **63.5799** to determine if they meet or exceed the 100 TPY threshold.

❑ If the facility is an existing facility that has any centrifugal casting or continuous casting/lamination operations, did the facility meet **one** of the following:

- o If the combination of all centrifugal casting and continuous lamination/casting operations emit 100 TPY or more of HAP, did the facility reduce the total organic HAP emissions from centrifugal casting and continuous lamination /casting operations by at least 95% by weight. As an alternative to meeting the 95 percent by weight requirement, the facility may meet the organic HAP emissions limits in **Table 5** and the continuous lamination/casting 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.
☐ Yes ☐ No ☐ NA

- o If the combination of all centrifugal casting and continuous lamination/casting operations emit less than 100 TPY of HAP, then the facility's centrifugal casting and continuous lamination/casting operations has met the appropriate requirements in **Table 3**.
☐ Yes ☐ No ☐ NA

❑ If the facility is 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, do they meet the applicable annual average organic HAP emissions limits in **Table 3** and the applicable work practice standards in Table 4. ☐ Yes ☐ No ☐ NA

❑ Unless as excepted below, if the facility is 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, have they reduced the total organic HAP emissions from these operations by at least 95 percent by weight and met any applicable work practice standards in **Table 4**. As an alternative to meeting the 95 percent by weight, the facility may meet the organic HAP emissions limits in **Table 5**. If the facility has a continuous lamination/casting

operation, that operation may alternatively meet an organic HAP emissions limit of 1.47 lbs/ton of neat resin plus and neat gel coat plus applied. ☐ Yes ☐ No ☐ NA

- o 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**. ☐ Yes ☐ No ☐ NA

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

❑ If the facility is an existing facility in which the combination of all centrifugal casting and continuous lamination/casting operations emitted less than 100 TPY of HAP or a new facility in which the combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC manufacturing, mixing and BMC manufacturing operations emitted less than 100 TPY of HAP at its initial compliance date and then subsequently meets or exceeds the 100 TPY threshold in any calendar year, did the facility either:

- o Notify their permitting authority of this change in their compliance report, or ☐ Yes ☐ No ☐ NA

- o Did the facility request a one-time exemption from the requirements for operations at or exceeding the 100 TPY threshold, provided that the exceedance was due to circumstances that will not be repeated, the average annual organic HAP emissions from the potentially affected operations for the last three years were below 100 TPY and the projected organic HAP emissions for the next calendar year are below 100 TPY, based on projected resin and gel coat use and the HAP emissions factors calculated according to procedures in 63.5799? ☐ Yes ☐ No ☐ NA

❑ If the facility applied for the one-time exemption listed above and subsequently exceeded the HAP emission threshold over the next 12-month period, did they notify the permitting authority in their semi-annual report that the exemption is removed, and did the facility comply with the applicable emissions limits in **Table 3** and applicable work practice standards in **Table 4**, within 3 years from the time the organic HAP emissions first exceeded the threshold? ☐ Yes ☐ No ☐ NA

❑ If the facility has repair operations subject to this subpart as defined in 63.5785, do these repair operations meet the requirements in **Table 3** and **Table 4**? ☐ Yes ☐ No ☐ NA

❑ If the facility uses an add-on control device to comply with this subpart, do they meet all requirements contained in 40 CFR Part 63, Subpart SS? ☐ Yes ☐ No ☐ NA

V. Options for Meeting Standards

13. What options for meeting the standards for open molding and centrifugal casting operations at their new and existing sources did the facility use? 63.5810

The facility must meet one of the following methods listed below in order to meet the standards for open molding or centrifugal casting operations in Table 3 or 5 to this subpart.

Note: The facility may use any control method that reduces organic HAP emissions, including reducing resin and gel coat organic HAP content, changing to non-atomized mechanical application, using

covered curing techniques, and routing part or all of the emissions to an add-on control. The facility may use different compliance options for the different operations listed in Table 3 or Table 5. The necessary calculations must be completed within 30 days after the end of each month. The facility may switch between the compliance options covered below. If the facility changes to an option based on a 12-month rolling average, they must base the average on the previous 12 months of data calculated using the compliance option being changed to, unless they were previously using an option that did not require maintaining records of resin and gel coat use. In this case, the facility must immediately begin collecting resin and gel coat use data and demonstrate compliance 12 months after changing options.

- ❑ Is the facility choosing to demonstrate that an individual resin or gel coat, as applied, meets the applicable emission limit in Table 3 or 5 to this subpart? ☐ Yes ☐ No ☐ NA

    - o If yes, did the facility calculate the actual organic HAP emissions factor for each different process stream within each operation type (The facility must calculate organic HAP emissions factors for each different process stream by using the appropriate equations in Table 1 for open molding and centrifugal casting, or using site-specific organic HAP emissions factors discussed in 63.5796. The emission factor calculation should include any and all emission reduction techniques used, including any add-on controls.)? ☐ Yes ☐ No ☐ NA

      Note: 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 four characteristics vary: the neat resin plus or neat gel coat plus organic HAP content, the gel coat type, the application technique, or the control technique.

    - o If the facility is using vapor suppressants to reduce HAP emissions, did they determine the vapor suppressant effectiveness (VSE) by conducting testing according to the procedures specified in Appendix A to subpart WWWW of 40 CFR part 63? ☐ Yes ☐ No ☐ NA

    - o If the facility is using an add-on control device to reduce HAP emissions, did they determine the add-on control factor by conducting capture and control efficiency testing using the procedures specified in 63.5850? ☐ Yes ☐ No ☐ NA

      Note: The organic HAP emissions factor calculated from the equations in Table 1, or a site-specific emissions factor, is multiplied by the add-on control factor to calculate the organic HAP emissions factor after control. Equation 1 must be used 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:
      - The % Control Efficiency = a value calculated from organic HAP emissions test measurements made according to the requirements of 63.5850.

- ❑ Is the calculated emission factor is less than or equal to the appropriate emission limit? If so, the facility has demonstrated that the process stream complies with the emission limit in Table 3. ☐ Yes ☐ No ☐ NA

  Note: It is not necessary that all process streams, considered individually, demonstrate compliance to use this option for some process streams. However, for any individual resin or gel coat used, if any of the process streams that include that resin or gel coat are to be used in any averaging calculations, then all process streams using that individual resin or gel coat must be included in the averaging calculations.

- ❑ Did the facility demonstrate, on average, that they meet the individual organic HAP emissions limits for each combination of operation type and resin application method or gel coat type shown in Table 3 as applicable? ☐ Yes ☐ No ☐ NA

- ❑ Did the facility group the process streams by operation type and resin application method or gel coat types listed in Table 3, and then calculate the weighted average emission factor based on the amounts of each individual resin or gel coat used for the last 12 months? ☐ Yes ☐ No ☐ NA

  Note: To do this, sum the product of each individual organic HAP calculated emissions factor calculated and the amount of neat resin plus and neat gel coat plus usage that corresponds 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 as shown in Equation 2:

$$\text{Average organic HAP Emissions Factor} = \frac{\sum_{i=1}^{n}(\text{Actual Process Stream } EF_i * \text{Material}_i)}{\sum_{i=1}^{n}\text{Material}_i} \qquad \text{(Eq. 2)}$$

  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.

- ❑ Did the facility compare each organic HAP emissions factor calculated with Equation 2 with its corresponding organic HAP emissions limit in Table 3 or 5? If all emissions factors are equal to or less than their corresponding emission limits, then the facility is in compliance. ☐ Yes ☐ No ☐ NA

- ❑ Does the facility demonstrate compliance with a weighted average emission limit? The facility must demonstrate each month that they meet each weighted average of the organic HAP emissions limits in Table 3 or 5 that are applicable. ☐ Yes ☐ No ☐ NA

- ❑ If the facility is using this option, have they demonstrated compliance with the weighted average organic HAP emissions limit for all open molding operations, and then separately demonstrated compliance with the weighted average organic HAP emissions limit for all centrifugal casting operations? Open molding operations and centrifugal casting operations may not be averaged with each other. ☐ Yes ☐ No ☐ NA

- ❑ Each month does the facility 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 the facility for the last 12-month period to determine the organic HAP emissions limit they must meet. ☐ Yes ☐ No ☐ NA

  Note: To do this, multiply the individual organic HAP emissions limits in Table 3 or 5 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 as shown in Equation 3:

$$\text{Weighted Average Emission Limit} = \frac{\sum_{i=1}^{n}(EL_i * Material_i)}{\sum_{i=1}^{n} Material_i} \quad \text{(Eq. 3)}$$

Where:
- EL_i = organic HAP emissions limit for operation type i, lbs/ton from Tables 3 or 5 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.

❑ Each month, did the facility calculate the weighted average organic HAP emissions factor for open molding and centrifugal casting? ☐ Yes ☐ No ☐ NA

NOTE: To do this, multiply the calculated 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 as shown in Equation 4:

$$\text{Actual Weighted Average organic HAP Emissions Factor} = \frac{\sum_{i=1}^{n}(\text{Actual Operation } EF_i * Material_i)}{\sum_{i=1}^{n} Material_i} \quad \text{(Eq. 4)}$$

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.

❑ Did the facility compare the values calculated in Equation 3 and Equation 4? 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 the facility is in compliance
☐ Yes ☐ No ☐ NA

❑ For any combination of manual resin application, mechanical resin application, filament application, or centrifugal casting, did the facility elect to meet the organic HAP emissions limit for any one of these application methods and use the same resin in all of the resin application methods? [Note: This option is limited to resins of the same type. The resin types for which this option may be used are non corrosion-resistant, corrosion-resistant and/or high strength, and tooling.]
☐ Yes ☐ No ☐ NA

- o Is the facility in compliance? [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 the resin organic HAP content is below the applicable value shown in Table 7 to this subpart, the resin is in compliance.]
☐ Yes ☐ No ☐ NA

- ❑ Did the facility also use a weighted average organic HAP content for each application methods mentioned above? [Note: Calculate the weighted average organic HAP content monthly. Use Equation 2, except substitute organic HAP content for organic HAP emissions factor.]
  ☐ Yes ☐ No ☐ NA

  - o Is the facility in compliance? The facility is 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. ☐ Yes ☐ No ☐ NA

  - o Did the facility choose to simultaneously use the averaging provisions to demonstrate compliance for any operations and/or resins that they did not include in their compliance demonstrations described above? [Note: Any resins for which a facility claims compliance under the (options) may not be included in any of the averaging calculations described by Equations 2, 3 and 4.] ☐ Yes ☐ No ☐ NA

    Note: The facility does not have to keep records of resin use for any of the individual resins where they demonstrate compliance under the option of using one application method/use of same resin for all application methods of that resin type, unless they elect to include that resin in the weighted averaging calculations for each application method.

14. What options for meeting the standards for continuous lamination/casting operations did the facility use? 63.5820

- ❑ Did the facility use one or more of the options below to meet the standards outlined in 63.5805. [See calculation procedures in 63.5865 through 63.5890.]?

  - o The compliant line option where they demonstrate that each continuous lamination line and each continuous casting line complies with the applicable standard.
    ☐ Yes☐ No ☐ NA

  - o The averaging option where they demonstrate that all continuous lamination and continuous casting lines combined, comply with the applicable standard. ☐ Yes ☐ No ☐ NA

  - o The add-on control device option, where if the facility's operation must meet the 58.5 weight % organic HAP emissions reduction limit in Table 3, then they have the option of demonstrating that they achieve 95% reduction of all wet-out area organic HAP emissions.
    ☐ Yes ☐ No ☐ NA

  - o The combination option where they use any combination of the compliant line and averaging options for affected sources at existing facilities or any combination of compliant line, averaging and add-on control device options (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%).
    ☐ Yes ☐ No ☐ NA

15. What options for meeting the standards for pultrusion operations subject to the 60 weight percent organic HAP emissions reduction requirements did the facility use? 63.5830

- ❑ Did the facility use one or more of the following options to meet the 60 weight percent organic HAP emissions limit in Table 3 as required by 63.5805?

  - o Achieve an overall reduction by capturing the organic HAP emissions and venting them to a control device or any combination of control devices. [Note: the facility must

conduct capture and destruction efficiency testing as specified in 63.5850 to determine the percent organic HAP emissions reduction.] ☐ Yes ☐ No ☐ NA

- o Design, install, and operate wet area enclosures and resin drip collection systems on pultrusion machines that meet the following criteria: ☐ Yes ☐ No ☐ NA

  i. 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. ☐ Yes ☐ No ☐ NA

  ii. 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. ☐ Yes ☐ No ☐ NA

  iii. 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. ☐ Yes ☐ No ☐ NA

  iv. 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. ☐ Yes ☐ No ☐ NA

  v. 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 following requirements: (a) 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. (b) The area that is displaced by entering reinforcement or exiting product is considered open. (c) Areas that are covered by brush covers are considered closed. ☐ Yes ☐ No ☐ NA

  vi. Open areas for level control devices, monitoring devices, agitation shafts, and fill hoses must have no more than 1.0 inch clearance. ☐ Yes ☐ No ☐ NA

  vii. 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. ☐ Yes ☐ No ☐ NA

  viii. 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 below. ☐ Yes ☐ No ☐ NA

  ix. 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 these times. All lines included in the average must have operated the entire time period being averaged. ☐ Yes ☐ No ☐ NA

x. No fans, blowers, and/or air lines may be allowed within the enclosure. The enclosure must not be ventilated. ☐ Yes ☐ No ☐ NA

❑ Did the facility use direct die injection pultrusion machines with resin drip collection systems that meet all the following criteria: (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? ☐ Yes ☐ No ☐ NA

❑ Did the facility use a preform injection system that meets the definition in 63.5935? ☐ Yes ☐ No ☐ NA

❑ Did the facility use any combination of these options in which different pultrusion lines comply with different options 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. ☐ Yes ☐ No ☐ NA

VI. General Compliance Requirements

16. Has the facility met the general requirements of this subpart? 63.5835

❑ Was the facility in compliance at all times with applicable work practice standards in Table 4 as well as the organic HAP emissions limits in Tables 3, or 5, or the organic HAP content limits in Table 7 as applicable, without the use of add-on controls? ☐ Yes ☐ No ☐ NA

❑ Is the facility in compliance with all applicable organic HAP emissions limits using add-on controls, except during periods of startup, shutdown, and malfunction? ☐ Yes ☐ No ☐ NA

❑ Did the facility always operate and maintain their affected source, including air pollution control and monitoring equipment, according to the general provisions in 63.6(e)(1)(i)? ☐ Yes ☐ No ☐ NA

❑ Did the facility 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 they must meet using an add-on control? ☐ Yes ☐ No ☐ NA

VII. Testing and Initial Compliance Requirements

17. Has the facility conducted initial performance tests or compliance demonstrations by the required date? 63.5840

❑ Did the facility conduct performance tests, performance evaluations, design evaluations, capture efficiency testing, and other initial compliance demonstrations by the compliance date specified in Table 2, unless they meet an exception? ☐ Yes ☐ No ☐ NA

o Does the facility have open molding and centrifugal casting operations and did they elect to meet an organic HAP emissions limit on a 12-month rolling average, initiate collection of the

required data on the compliance date and demonstrate compliance 1 year after the compliance date? ☐ Yes ☐ No ☐ NA

- o Does the facility have new sources that use add-on controls and chose to initially meet compliance and demonstrate compliance within 180 days after their compliance date? ☐ Yes ☐ No ☐ NA

18. Has the facility conducted subsequent performance tests by the required date? 63.5845

- ❑ Has the facility conducted a performance test every 5 years following the initial performance test for any standard they meet with an add-on control device? ☐ Yes ☐ No ☐ NA

19. Did the facility conduct the performance tests, performance evaluations and design evaluations using proper procedures? 63.5850

- ❑ If the facility is using any add-on controls to meet a organic HAP emissions limit in this subpart, did they conduct each performance test, performance evaluation, and design evaluation in 40 CFR part 63, subpart SS, that was applicable? [Note: The basic requirements for performance tests, performance evaluations, and design evaluations are presented in Table 6.] ☐ Yes ☐ No ☐ NA
- ❑ Was each performance test conducted according to the requirements in 63.7(e)(1) and under the specific conditions according to 40 CFR Part 63? ☐ Yes ☐ No ☐ NA
- ❑ Was each performance evaluation conducted according to the requirements in 63.8(e) as applicable and under the specific conditions according to 40 CFR Part 63? ☐ Yes ☐ No ☐ NA
- ❑ Did the facility avoid conducting performance tests or performance evaluations during periods of startup, shutdown or malfunction, as specified in 63.7(e)(1)? ☐ Yes ☐ No ☐ NA
- ❑ Did the facility conduct the control device performance test using the emission measurement methods specified below:
  - o Use either Method 1 or 1A of appendix A to 40 CFR Part 60, as appropriate, to select the sampling sites. ☐ Yes ☐ No ☐ NA
  - o 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. ☐ Yes ☐ No ☐ NA
  - o 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 Method 25A is used, the facility must assume that all gaseous organic emissions measured as carbon are organic HAP emissions. If Method 18 is used, and the number of organic HAP in the exhaust stream exceeds five, the facility 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. Method 18 must not be used to measure organic HAP emissions from a combustion device; Method 25A must instead be used and the facility should assume that all gaseous organic mass emissions measured as carbon are organic HAP emissions. ☐ Yes ☐ No ☐ NA
  - o Use American Society for Testing and Materials (ASTM) D6420–99 in lieu of Method 18 of 40 CFR part 60, appendix A, under the following conditions:

- 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.
- 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.
- A minimum of one sample/analysis cycle is completed at least every 15 minutes.

☐ Yes ☐ No ☐ NA

o 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). The facility may use American Society of Mechanical Engineers (ASME) PTC 19–10–1981–Part 10 as an alternative to EPA Method 3B of appendix A to 40 CFR part 60. ☐ Yes ☐ No ☐ NA

❑ Did the control device performance test consist of three runs and did each run last at least 1 hour?
☐ Yes ☐ No ☐ NA

o Did the production conditions during the test runs represent normal production conditions with respect to the types of parts being made and material application methods?
☐ Yes ☐ No ☐ NA

o Did the production conditions during the test also represent maximum potential emissions with respect to the organic HAP content of the materials being applied and the material application rates? ☐ Yes ☐ No ☐ NA

❑ If the facility is using a concentrator/ oxidizer control device, did they 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? ☐ Yes ☐ No ☐ NA

o If the outlet flow from the concentrator and oxidizer are exhausted in separate stacks, did the facility test both stacks simultaneously with the inlet to the concentrator to determine the overall control device efficiency? ☐ Yes ☐ No ☐ NA

❑ During the test did the facility 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? ☐ Yes ☐ No ☐ NA

20. Did the facility meet monitor installation and operation requirements? 63.5855

❑ Did the facility monitor and operate all add-on control devices according to the procedures in 40 CFR Part 63, Subpart SS? ☐ Yes ☐ No ☐ NA

21. Did the facility demonstrate initial compliance with the standards? 63.5860

❑ Did the facility demonstrate initial compliance with each applicable organic HAP emissions standard in paragraphs (See 63.5805) by using the procedures shown in Tables 8 and 9?
☐ Yes ☐ No ☐ NA

❑ If the facility is using an add-on control device to demonstrate compliance, did they also establish each control device operating limit in 40 CFR Part 63, subpart SS, that was applicable to them?
☐ Yes ☐ No ☐ NA

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

22. Did the facility generate data to demonstrate compliance with the standards for continuous lamination/casting operations? 63.5865

❑ For continuous lamination/casting affected sources complying with a percent reduction requirement, did the facility generate the data identified in the applicable data requirement?
☐ Yes ☐ No ☐ NA

❑ For continuous lamination/casting affected sources complying with a lbs/ ton limit, did the facility generate the data identified in Tables 11 and 12 for each applicable data requirement?
☐ Yes ☐ No ☐ NA

23. Did the facility calculate annual uncontrolled and controlled organic HAP emissions from wet-out area(s) and from oven(s) for continuous lamination/casting operations? 63.5870

❑ In order to calculate annual uncontrolled and controlled organic HAP emissions from wet-out areas and from ovens, did the facility

- o 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, and ☐ Yes ☐ No ☐ NA
- o Determine how much of each formula for each end product is applied each year on each line, and ☐ Yes ☐ No ☐ NA
- o Assign uncontrolled and controlled wet-out area and uncontrolled and controlled oven organic HAP emissions estimation equations or factors to each formula?
☐ Yes ☐ No ☐ NA

Note: The overall capture efficiency must be determined using the procedures outlined in 63.5850.

❑ In order to develop uncontrolled and controlled organic HAP emissions estimation equations and factors, did the facility, at a minimum, complete the following:

- o 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, non-corrosion resistant gel coated end products, corrosion-resistant non gel coated end products, and non corrosion-resistant non gel coated end products. This step creates end product/thickness combinations.
☐ Yes ☐ No ☐ NA
- o 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. ☐ Yes ☐ No ☐ NA

- For each end product/thickness combination being produced, select the formula with the highest usage rate for testing. ☐ Yes ☐ No ☐ NA

- 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. ☐ Yes ☐ No ☐ NA

- 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 ☐ Yes ☐ No ☐ NA

- 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. ☐ Yes ☐ No ☐ NA

❑ In lieu of using the method specified above for developing uncontrolled and controlled organic HAP emissions estimation equations and factors, did the facility choose either of the methods specified below, as applicable?

- For either uncontrolled or controlled organic HAP emissions estimates, 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 the permitting authority. If a previously established equation or factor is specific to the wet-out area only, or to the oven only, then the facility must develop the corresponding uncontrolled or controlled equation or factor for the other organic HAP emissions source. ☐ Yes ☐ No ☐ NA

- For uncontrolled (controlled) organic HAP emissions estimates, use controlled (uncontrolled) organic HAP emissions estimates and control device destruction efficiency to calculate uncontrolled (controlled) organic HAP emissions provided the control device destruction efficiency was calculated at the same time the facility collected the data to develop its controlled (uncontrolled) organic HAP emissions estimation equations and factors. ☐ Yes ☐ No ☐ NA

❑ Did the facility assign to each formula an uncontrolled organic HAP emissions estimation equation or factor based on the end product/thickness combination for the formula that is used? ☐ Yes ☐ No ☐ NA

❑ In order to calculate the 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, did the facility multiply each formula's annual usage by its appropriate organic HAP emissions estimation equation or factor and sum the individual results? ☐ Yes ☐ No ☐ NA

- In order to calculate the annual uncontrolled organic HAP emissions that escape from the enclosure on the wet-out area, did the facility 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)? ☐ Yes ☐ No ☐ NA

- In order to calculate the annual uncontrolled oven organic HAP emissions, did the facility multiply each formula's annual usage by its appropriate uncontrolled organic HAP emissions estimation equation or factor and sum the individual results? ☐ Yes ☐ No ☐ NA

- In order to calculate annual controlled organic HAP emissions, did the facility 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? ☐ Yes ☐ No ☐ NA

❑ Where the facility is calculating both uncontrolled and controlled organic HAP emissions estimation equations and factors, did they test the same formulae? In addition, did they develop both sets of equations and factors from the same tests? ☐ Yes ☐ No ☐ NA

24. Did the facility determine the capture efficiency of the closures on their wet-out areas and the capture efficiency for oven(s) for the continuous lamination/casting operations? 63.5875

❑ 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, did the facility construct a temporary total enclosure and verify it using EPA Method 204? ☐ Yes ☐ No ☐ NA

- Was the capture efficiency testing determined using EPA Methods 204B through E of Appendix M to 40 CFR Part 51? ☐ Yes ☐ No ☐ NA

❑ Does the facility operate an oven under negative pressure (where the capture efficiency of an oven is to be considered 100 percent)? ☐ Yes ☐ No ☐ NA

25. How did the facility 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? 63.5880

❑ Did the facility complete the following to determine how much neat resin plus and neat gel coat plus is applied to the line each year?

- Track formula usage by end product/thickness combinations. ☐ Yes ☐ No ☐ NA

- Use in-house records to show usage. This may be either from automated systems or manual records. ☐ Yes ☐ No ☐ NA

- 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. ☐ Yes ☐ No ☐ NA

- Sum the amounts from the daily records to calculate annual usage of each formula/end product combination by line. ☐ Yes ☐ No ☐ NA

26. How did the facility calculate percent reduction to demonstrate compliance for continuous lamination/casting operations? 63.5885

❑ Did the facility correctly calculate the percent reduction by using any of the methods described below:

o ***Compliant line option.*** If all of the facility wet-out areas have PTE that meet the requirements of EPA Method 204 of appendix M of 40 CFR part 51, and all of their wet-out area organic HAP emissions and oven organic HAP emissions are vented to an add-on control device, did the facility use Equation 1 of this section to demonstrate compliance.
☐ Yes ☐ No ☐ NA

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

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

o In all other situations, did the facility use Equation 2 of this section to demonstrate compliance with the compliant line option? ☐ Yes ☐ No ☐ NA

$$PR = \frac{(WAE_{ci} + O_{ci}) - (WAE_{co} + O_{co})}{(WAE_{ci} + WAE_{u} + O_{ci} + O_{u})} \times 100 \qquad (Eq.\ 2)$$

Where:
- PR=percent reduction;
- WAEci=wet-out area organic HAP emissions, lbs per year, vented to a control device;
- WAEu=wet-out area organic HAP emissions, lbs per year, not vented to a control device;
- Ou=oven organic HAP emissions, lbs per year, not vented to a control device;
- Oci=oven organic HAP emissions, lbs per year, vented to a control device;
- WAEco=wet-out area organic HAP emissions, lbs per year, from the control device outlet;
- Oco=oven organic HAP emissions, lbs per year, from the control device outlet.

o ***Averaging option.*** Did the facility use Equation 3 of this section to calculate percent reduction? ☐ Yes ☐ No ☐ NA

$$PR = \frac{\left(\sum_{i=1}^{m} WAEi_{ci} + \sum_{j=1}^{n} Oj_{ci}\right) - \left(\sum_{i=1}^{m} WAEi_{co} + \sum_{j=1}^{n} Oj_{co}\right)}{\left(\sum_{i=1}^{m} WAEi_{ci} + \sum_{j=1}^{n} Oj_{ci} + \sum_{i=1}^{m} WAEi_{u} + \sum_{j=1}^{n} Oj_{u}\right)} \times 100 \qquad (Eq.\ 3)$$

Where:
- PR=percent reduction;
- WAEici=wet-out area organic HAP emissions from wet-out area i, lbs per year, sent to a control device;
- WAEiu=wet-out area organic HAP emissions from wet-out area i, lbs per year, not sent to a control device;
- WAEico=wet-out area organic HAP emissions from wet-out area i, lbs per year, at the outlet of a control device;
- Oju=organic HAP emissions from oven j, lbs per year, not sent to a control device;
- Ojci=organic HAP emissions from oven j, lbs per year, sent to a control device;
- Ojco=organic HAP emissions from oven j, lbs per year, at the outlet of the control device;
- m=number of wet-out areas;

- n=number of ovens

o ***Add-on control device option.*** Did the facility use Equation 1 of this section to calculate percent reduction? ☐ Yes ☐ No ☐ NA

o ***Combination option.*** Did the facility use Equations 1 through 3 of this section, as applicable, to calculate percent reduction? ☐ Yes ☐ No ☐ NA

27. How did the facility calculate their organic HAP emissions factor to demonstrate compliance for continuous lamination/casting operations? 63.5890

☐ ***Compliant line option.*** Use Equation 1 of this section to calculate a organic HAP emissions factor in lbs/ton ☐ Yes ☐ No ☐ NA

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

Where:
- E=HAP emissions factor in lbs/ton of resin and gel coat
- WAEu=uncontrolled wet-out area organic HAP emissions, lbs per year
- WAEc=controlled wet-out area organic HAP emissions, lbs per year
- Ou=uncontrolled oven organic HAP emissions, lbs per year
- Oc=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

☐ ***Averaging option.*** Use Equation 2 of this section to demonstrate compliance. ☐ Yes ☐ No ☐ NA

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

Where:
- E=HAP emissions factor in lbs/ton of resin and gel coat
- WAEui=uncontrolled organic HAP emissions from wet-out area i, lbs per year
- WAEci=controlled organic HAP emissions from wet-out area i, lbs per year
- Ouj=uncontrolled organic HAP emissions from oven j, lbs per year
- Ocj=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

❑ ***Combination option.*** Use Equations 1 and 2 of this section, as applicable, to demonstrate compliance. ☐ Yes ☐ No ☐ NA

IX. Continuous Compliance Requirements

28. How has the facility monitored and collected data to demonstrate continuous compliance? 63.5895

❑ During production, did the facility collect and keep a record of data as indicated in 40 CFR part 63, subpart SS, if they are using an add-on control device? ☐ Yes ☐ No ☐ NA

❑ Did the facility monitor and collect data as specified below:

- o Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), did the facility conduct all monitoring in continuous operation (or collect data at all required intervals) at all times that the affected source is operating. ☐ Yes ☐ No ☐ NA
- o Did the facility exclude 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? ☐ Yes ☐ No ☐ NA
- o Did the facility use all the data collected during all other periods in assessing the operation of the control device and associated control system. ☐ Yes ☐ No ☐ NA
- o At all times, did the facility maintain necessary parts for routine repairs of the monitoring equipment? ☐ Yes ☐ No ☐ NA

  Note: 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.

❑ Did the facility collect and keep records of resin and gel coat use, organic HAP content, and operation where the resin is used if they are meeting any organic HAP emissions limits based on an organic HAP emissions limit in Tables 3 or 5 to this subpart. ☐ Yes ☐ No ☐ NA

- o Did the facility collect and keep records of resin and gel coat use, organic HAP content, and operation where the resin is used if they are meeting any organic HAP content limits in Table 7 if they are averaging organic HAP contents? Resin use records may be based on purchase records if the facility 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. ☐ Yes ☐ No ☐ NA
- o If the facility initially demonstrated 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, the facility 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. ☐ Yes ☐ No ☐ NA
- o If after this initial demonstration, the facility changes 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 they 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.
☐ Yes ☐ No ☐ NA

❑ For each of their pultrusion machines, did the facility record all times that wet area enclosures doors or covers are open and there is resin present in the resin bath? ☐ Yes ☐ No ☐ NA

29. How did the facility demonstrate continuous compliance with the standards? 63.5900

❑ Has the facility demonstrated continuous compliance with each applicable standard in 63.5805 according to the methods specified below: ☐ Yes ☐ No ☐ NA

- o 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. ☐ Yes ☐ No ☐ NA

- o 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). ☐ Yes ☐ No ☐ NA

- o 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).
☐ Yes ☐ No ☐ NA

- o Compliance with the work practice standards in Table 4 to this subpart is demonstrated by performing the work practice required for your operation. ☐ Yes ☐ No ☐ NA

❑ If the facility had any deviations, did they report each deviation from each standard (see 63.5805) that applied? The deviations must be reported according to the requirements in 63.5910.
☐ Yes ☐ No ☐ NA

❑ During periods of startup, shutdown or malfunction, did the facility meet their applicable organic HAP emissions limits and work practice standards? ☐ Yes ☐ No ☐ NA

Note: When the facility uses an add-on control device to meet standards in 63.5805, they are not required to meet those standards during periods of startup, shutdown, or malfunction, but they must operate the affected source in accordance with their startup, shutdown, and malfunction plan Consistent with 63.6(e) and 63.7(e)(1), deviations that occur during a period of malfunction for those affected sources and standards are not violations if the facility can demonstrate to the Administrator's satisfaction that they were operating in accordance with their startup, shutdown, and malfunction plan. The Administrator will then determine whether these deviations are violations, according to the provisions in 63.6(e).

X. Notifications, Reports and Records

30. Did the facility submit the proper notifications by the due date? 63.5905

❑ Did the facility submit all applicable notifications described in Table 13 by the dates specified in the table? [Note: The notifications are described more fully in 40 CFR Part 63, Subpart A.]
☐ Yes ☐ No ☐ NA

❑ If the facility had to change any information submitted in any notification, did they submit the changes in writing to the Administrator within 15 calendar days after the change?
☐ Yes ☐ No ☐ NA

31. Did the facility submit the proper reports by the due date? 63.5910

❑ Did the facility submit each applicable report as described in Table 14? ☐ Yes ☐ No ☐ NA

❑ Did the facility submit each applicable report by the date specified in Table 14 (unless the Administrator has approved a different schedule for submission) according to the following:
☐ Yes ☐ No ☐ NA

- o Did the first compliance report cover the period beginning on the compliance date that is specified for the affected source 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 the source? ☐ Yes ☐ No ☐ NA
- o Was the first compliance report 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 the affected source? ☐ Yes ☐ No ☐ NA
- o Did each subsequent compliance report cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31 ☐ Yes ☐ No ☐ NA
- o Was each subsequent compliance report 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? ☐ Yes ☐ No ☐ NA

  Note: For each affected source that is subject to the permitting requirements of 40 CFR Part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports, a facility may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of those listed in this section.

❑ Does the compliance report must contain the following information:

- o Company name and address. ☐ Yes ☐ No ☐ NA
- o 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.
  ☐ Yes ☐ No ☐ NA
- o Date of the report and beginning and ending dates of the reporting period.
  ☐ Yes ☐ No ☐ NA

- o Whether or not the facility had a startup, shutdown, or malfunction during the reporting period and that the actions taken were consistent with the startup, shutdown, and malfunction plan ☐ Yes ☐ No ☐ NA

- o The information in required by 63.10(d)(5)(i). ☐ Yes ☐ No ☐ NA

- o If there are no deviations from any applicable organic HAP emissions limitations (emissions limit and operating limit) and if there are no deviations from the requirements for work practice standards in Table 4, a statement that there were no deviations from the organic HAP emissions limitations or work practice standards during the reporting period. ☐ Yes ☐ No ☐ NA

- o 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. ☐ Yes ☐ No ☐ NA

❑ 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 the facility is not using a CMS to comply with the organic HAP emissions limitations or work practice standards in this subpart, does the compliance report contain information that includes periods of startup, shutdown, and malfunction, the total operating time of each affected source during the reporting period, information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken? ☐ Yes ☐ No ☐ NA

❑ 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 below (this includes periods of startup, shutdown, and malfunction):

- o The date and time that each malfunction started and stopped. ☐ Yes ☐ No ☐ NA

- o The date and time that each CMS was inoperative, except for zero (low level) and high-level checks. ☐ Yes ☐ No ☐ NA

- o The date, time, and duration that each CMS was out of control, including the information in 63.8(c)(8). ☐ Yes ☐ No ☐ NA

- o 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. ☐ Yes ☐ No ☐ NA

- o 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. ☐ Yes ☐ No ☐ NA

- o 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. ☐ Yes ☐ No ☐ NA

- o 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. ☐ Yes ☐ No ☐ NA

- o An identification of each organic HAP that was monitored at the affected source. ☐ Yes ☐ No ☐ NA
- o A brief description of the process units. ☐ Yes ☐ No ☐ NA
- o A brief description of the CMS. ☐ Yes ☐ No ☐ NA
- o The date of the latest CMS certification or audit. ☐ Yes ☐ No ☐ NA
- o A description of any changes in CMS, processes, or controls since the last reporting period. ☐ Yes ☐ No ☐ NA

❑ Did the facility report if they ever exceeded the 100 TPY organic HAP emissions threshold if that exceedance made the facility subject to § 63.5805(b) or (d). Did this report include any request for an exemption under § 63.5805(e)? ☐ Yes ☐ No ☐ NA

❑ If the facility received an exemption under § 63.5805(e) and subsequently exceed the 100 tpy organic HAP emissions threshold, did they report this exceedance as required in § 63.5805(f). ☐ Yes ☐ No ☐ NA

Note: 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.

❑ Did the facility 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. ☐ Yes ☐ No ☐ NA

32. Does the facility have the proper records? 63.5915

❑ (a) Did the facility keep the records listed in paragraphs (a)(1) through (3) of this section? ☐ Yes ☐ No ☐ NA

- o 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). ☐ Yes ☐ No ☐ NA
- o The records in 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction. ☐ Yes ☐ No ☐ NA
- o Records of performance tests, design, and performance evaluations as required in 63.10(b)(2). ☐ Yes ☐ No ☐ NA

❑ If the facility used an add-on control device, did they keep all records required in 40 CFR Part 63, subpart SS, to show continuous compliance with this subpart? ☐ Yes ☐ No ☐ NA

- ❑ Did the facility 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? ☐ Yes ☐ No ☐ NA

- ❑ Did the facility keep a certified statement that they are in compliance with the work practice requirements in Table 4 to this subpart, as applicable? ☐ Yes ☐ No ☐ NA

- ❑ For a new or existing continuous lamination/casting operation, did the facility keep the records listed below when complying with the percent reduction and/or lbs/ton requirements specified in 63.5805:

    - o All data, assumptions, and calculations used to determine percent reduction and/or lbs/ ton as applicable; ☐ Yes ☐ No ☐ NA

    - o A brief description of the rationale for the assignment of an equation or factor to each formula; ☐ Yes ☐ No ☐ NA

    - o When facility-specific organic HAP emissions estimation equations or factors were used, 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 ☐ Yes ☐ No ☐ NA

    - o For all organic HAP emissions estimation equations and organic HAP emissions factors, documentation that the appropriate permitting authority has approved them. ☐ Yes ☐ No ☐ NA

33. Are the facility records in the proper form and kept for the appropriate time? 63.5920

- ❑ Does the facility maintain all applicable records in such a manner that they can be readily accessed and are suitable for inspection? ☐ Yes ☐ No ☐ NA

- ❑ Did the facility keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record? ☐ Yes ☐ No ☐ NA

- ❑ Did the facility keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record? [Note: Records may be kept offsite for the remaining 3 years. Records may be kept in hard copy or computer readable form including, but not limited to, paper, microfilm, computer floppy disk, magnetic tape, or microfiche.] ☐ Yes ☐ No ☐ NA

XI. Other Requirements and Information

34. Does the facility know which parts of the General Provisions apply to them? 63.5925

- ❑ Has the facility referred to Table 15 to determine which parts of the General Provisions in 63.1 through 63.15 apply to them? ☐ Yes ☐ No ☐ NA

XII. Definitions

The following definitions are for terms used in this Subpart WWWW [63.5935] and are also defined in the Clean Air Act (CAA) in 40 CFR 63.2 and in the general provisions of this part.

Atomized mechanical application – 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) – 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 – a process that involves the preparation of BMC (bulk molding compound).

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

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

Clear production gel – an un-pigmented, 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 – 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 – a shaped and cured part produced by using composite materials.

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

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

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

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

Corrosion-resistant gel coat – 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 – 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 ≥ 12.0 or ≤ 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 – 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 non-mechanical 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 – 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 – a gel coat used for products for which low flame spread/low-smoke resin is used.

Fluid impingement technology – 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 – a standard related to food contact application contained in Food and Drug Administration's regulations at 21 CFR 177.2420.

Gel Coat – 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 – 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 – 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 – a gel coat applied to a product that requires high strength resin.

High strength resins – 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 – 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 – products that meet the following requirements as well as 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 – an open molding process for fabricating composites in which composite materials are applied to the mold by pouring or by using hands and non-mechanical tools, such as brushes and rollers. Materials are rolled out or worked by using non mechanical 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 – 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 non-mechanical tools prior to curing.

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

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

Neat gel coat plus – 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 – the resin as purchased from the supplier, but not including any inert fillers.

Neat resin plus – 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.

Non-atomized mechanical application – 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 non-atomized 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 non-atomized application include flow coaters, pressure fed rollers, and fluid impingement spray guns.

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

Non-corrosion resistant product – any product other than a corrosion resistant product or a mold.

Non-routine manufacture – manufacturing of 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 – a specific process typically found at a reinforced plastic +composites facility. Examples of operations are non-corrosion resistant manual resin application, corrosion resistant mechanical resin application, pigmented gel coat application, mixing and HAP-containing materials storage.

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

Open molding – 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 – 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 – 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 – 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 that 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 – reinforcing fabric received pre-coated with resin which is usually cured through the addition of heat.

Pultrusion – 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 – 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) – 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 – 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 – a process which involves the preparation of SMC.

Tooling gel coat – 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 – 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 – 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 – 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 have been added.

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

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

XIII. RPC MACT Compliance Timeline (Final Rule: 68 FR 19375 and 70 FR 50118)

A. Compliance Timeline for Existing Sources (See Notes 1 and 2)

Event	Timeline
Effective Date	**April 21, 2003**
Submit Initial Notification	**August 19, 2003**
Compliance Date (See Note 3)	**April 21, 2006** **Existing Area Source that becomes a major source: April 21, 2006** or three years after the existing area source becomes a major source, whichever is later.
Submit notification of compliance status as required by 63.5905 and 63.9 for all rule requirements that must be met except those where the source will demonstrate compliance based on a 12-month rolling average. See below for operations where compliance is by averaging. The requirements of this notification are contained in 63.9(h)	**Existing Source: May 20, 2006** for sources that were major sources on **April 21, 2003**. **Existing Area Source that becomes a Major Source after 4/21/03:** Three years plus 30 days after the compliance date.
Submit first semiannual compliance report required by 63.5910 and 63.10. the first report would not include any 12-month averaging data. (See Note 4)	**Existing Source**: **January 31, 2007** for sources that were major sources on April 21, 2003. **Existing Area Source that becomes a major source after 4/21/03: January 30 or July 30**, whichever is the first date that follows the end of the first calendar half after the compliance date.
Submit notification of compliance status as required by 63.5905 and 63.9 for all operations where compliance is demonstrated based on a 12-month rolling average. (See Note 5)	**Existing Source**: **May 21, 2007** for sources that were major sources on April 21, 2003. **Existing Area Source that becomes a major source after 4/21/03**: **Three years plus 30 days** after the compliance date.
Submit second semiannual compliance report required by 63.5910 and 63.10. The second report would include 12-month averaging data. (See Note 6)	**Existing Source**: **July 31, 2007**, for sources that were major sources on April 21, 2003. **Existing Area Source that becomes a Major Source after 4/21/03: January 31 or July 31**, whichever is the first date that follows the initial semiannual compliance report.

Notes:

1. This timeline does not include the situation where a facility is required to perform a performance test.

2. If any due date for a notification or report fall s on a Sunday or a postal holiday, it must be postmarked by the last mailing day prior to the due date.

3. For any emissions limits where a source is demonstrating compliance by averaging , the source must begin collecting data for averaging calculations on the first day of the month following the compliance date unless the compliance date falls on the first of the month. In this case, the source must start collection data on the compliance date. For example, an existing facility with a compliance date of April 21, 2006, starts collecting data on May 1, and the first month in the initial 12-mohth rolling average calculation is May 2006. The source will begin collecting data on the first of the month because the intent is for the calculation periods to cover a whole month.

4. The report would cover the time period of April 21, 2006 until December 31, 2006 for the existing sources with a compliance date of April 21, 2006.

5. This notification of compliance would cover the 12-month rolling average of May 1, 2006, until April 30, 2007.

6. This report would cover the time period of January 1, 2007 until June 30, 2007 and would include 12-month rolling average calculations for the end of May and June 2007. The 12-month rolling average calculation is required at the end of each month.

B. Compliance Timeline for New Sources (See Notes 1 and 2)

Event	Timeline
Effective Date	**April 21, 2003**
Submit Initial Notification	Within 120 days from start-up or August 19, 2003, whichever is later
Compliance Date (See Note 3)	Upon start-up, or April 21, 2003, whichever is later **New Area Source that becomes a Major Source after the effective dates of the rule**: Immediately upon becoming a major source.
Submit notification of compliance status as required by 63.5905 and 63.9 for all rule requirements that must be met except those where the source will demonstrate compliance based on a 12-month rolling average. See below for operations where compliance is by averaging. The requirements of this notification are contained in 63.9(h)	**New Sources:** May 21, 2003, or 30 days after startup, whichever is later, for sources that were major sources on April 21, 2003. **New Area Source that becomes a Major Source after 4/21/03:** 30 days after becoming a major source.
Submit first semiannual compliance report required by 63.5910 and 63.10. the first report would not include any 12-month averaging data. (See Note 4)	**New Source**: **January 31, 2004**, for new sources that were major sources on April 21, 2003. **New Area Source that becomes a major source after 4/21/03**: **January 30 or July 30**, whichever is the first day that follows the end of the first calendar half after the compliance date.
Submit notification of compliance status as required by 63.5905 and 63.9 for all operations where compliance is demonstrated based on a 12-month rolling average. (See Note 5)	**New Sources**: **May 21, 2004**, or one year and 30 days after startup, whichever is later. **New Area Source that becomes a major source after 4/21/03**: One year and 30 days after becoming a major source.
Submit second semiannual compliance report required by 63.5910 and 63.10. The second report would include 12-month averaging data. (See Note 6)	**New sources**: **July 31, 2004**, for sources that were major sources on April 21, 2003. **New Area Source that becomes a major source after 4/21/03**: **January 30 or July 30**, whichever is the first date that follows the initial semiannual compliance report.

Notes:

1. This timeline does not include the situation where a facility is required to perform a performance test.

2. If any due date for a notification or report fall s on a Sunday or a postal holiday, it must be postmarked by the last mailing day prior to the due date.

3. For any emissions limits where a source is demonstrating compliance by averaging , the source must begin collecting data for averaging calculations on the first day of the month following the compliance date unless the compliance date falls on the first of the month. In this case, the source must start collection data on the compliance date. For example, an existing facility with a compliance date of April 21, 2006, starts collecting data on May 1, and the first month in the initial 12-mohth rolling average calculation is May 2006. The source will begin collecting data on the first of the month because the intent is for the calculation periods to cover a whole month.

4. The report would cover the time period of April 21, 2006 until December 31, 2006 for the existing sources with a compliance date of April 21, 2006.

5. This notification of compliance would cover the 12-month rolling average of May 1, 2006, until April 30, 2007.

6. This report would cover the time period of January 1, 2007 until June 30, 2007 and would include 12-month rolling average calculations for the end of May and June 2007. The 12-month rolling average calculation is required at the end of each month.

XIV. Tables 1 – 15 for Subpart WWWW of Part 63

Table 1 to Subpart WWWW of Part 63 – Equations to Calculate Organic HAP Emissions Factors for Specific Open Molding and Centrifugal Casting Process Streams (See Note 1)

As specified in 63.5810 use the equations in this table to calculate organic HAP emissions factors for specific open molding and centrifugal casting process streams.

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% Organic HAP (19% organic HAP for non-atomized gel coat) (See notes 2, 3 & 4)…	Use this organic HAP Emissions Factor (EF) Equation for materials with 33% or more organic HAP (19% for non-atomized gel coat) (See notes 2, 3 & 4)…
1. Open Molding Operation	a. Manual resin application	Non vapor suppressed resin	EF = 0.126 x %HAP x 2000	EF = [(0.286 x %HAP) – 0.0529] x 2000
		Vapor suppressed resin	EF = 0.126 x %HAP x 2000 x [1 – (0.5 x VSE factor)]	EF = [(0.286 x %HAP) – (0.0529) x 2000 x (1-(0.5 x VSE factor)]
		Vacuum bagging/closed-mold curing with roll out	EF = 0.126 x %HAP x 2000 x 0.08	EF = [(0.286 x %HAP) – 0.0529] x 2000 x 0.8
		Vacuum bagging/closed-mold curing without rollout	EF = (0.126 x %HAP x 2000 x 0.5	EF = [(0.286 x %HAP) – 0.0529] x 2000 x 0.5
	b. Atomizes mechanical resin application	Non vapor suppressed resin	EF = 0.169 x %HAP x 2000	EF = [(0.714 x %HAP) – 0.18] x 2000
		Vapor suppressed resin	EF = 0.169 x %HAP x 2000 x [1-(0.45 x VSE factor)]	EF = [(0.714 x %HAP) – 0.18) x 2000 x (1-(0.45 x VSE factor)]
		Vacuum bagging/closed-mold curing with roll-out	EF = 0.169 x %HAP x 2000 x 0.55	EF = [(0.714 x %HAP) – 0.18] x 2000 x 0.85
		Vacuum bagging/closed-mold curing without rollout	EF = 0.169 x %HAP x 2000 x 0.85	EF = [(0.714 x %HAP) – 0.18] x 2000 x 0.55
	c. Non-atomized mechanical resin application	Non vapor suppressed resin	EF = 0.107 x %HAP x 2000	EF = [(0.157 x %HAP) – 0.0165] x 2000
		Vapor suppressed resin	EF = 0.107 x %HAP x 2000 x [1-(0.45 x VSE factor)]	EF = [(0.157 x %HAP) – 0.0165) x 2000 x (1-(0.45 x VSE factor)]
		Closed-mold curing with roll-out	EF = 0.107 x %HAP x 2000 x 0.85	EF = [(0.157 x %HAP) – 0.0165] x 2000 x 0.85
		Vacuum bagging/closed-mold curing without roll-out	EF = 0.107 x %HAP x 2000 x 0.55	EF = [(0.157 x %HAP) – 0.0165] x 2000 x 0.55
	d. Atomized mechanical resin application with robotic or automated spray control (see Note 5)	Non Vapor suppressed resin	EF = 0.169 x %HAP x 2000 x 0.77	EF = 0.77 x [(0.714 x %HAP) – 0.18] x 2000
	e. Filament application (See Note 6)	Non vapor suppressed resin	EF = 0.184 x %HAP x 2000	EF = [(0.2746 x %HAP) – 0.0298] X 2000
		Vapor suppressed resin	EF = 0.12 x %HAP x 2000	EF = [(0.2746 x %HAP) – 0.0298] x 2000 x 0.65
	f. Atomized spray gel coat application	Non vapor suppressed gel coat	EF = 0.445 x %HAP x 2000	EF = [(1.03646 X %HAP) – 0.195] X 2000
	g. Non-atomized spray gel coat application	Non vapor suppressed gel coat	EF = 0.185 x %HAP x 2000	EF = [(0.4506 x %HAP) – 0.505] x 2000
	h. Atomized spray gel coat application using robotic or automated spray	Non vapor suppressed gel coat	EF = 0.445 x %HAP x 2000 x 0.73	EF = [(1.03646 x %HAP) – 0.195] x 2000 x 0.73
Centrifugal casting operations (See notes 7 & 8)	Heated air blown through molds	Non vapor suppressed resin	EF = 0.558 x %HAP x 2000	EF = 0.558 x %HAP x 2000
	Vented molds, but air vented through the molds is not heated	Non vapor suppressed resin	EF = 0.026 x %HAP x 2000	EF = 0.026 X %HAP x 2000

Table 1 Notes:

1. The equations in this table are intended for use in calculating emission factors to demonstrate compliance with the emission limits in Subpart WWWW. These equations may not be the most appropriate method to calculated emission estimates for other purposes. However, this does not preclude a facility from using the equations in this table to calculate emission factors for purposes other than rule compliance if these equations are the most accurate available.

2. 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.

3. 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.

4. 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.

5. 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 non-atomized organic HAP emissions factor equation. Automated or robotic spray systems using non-atomized spray should use the appropriate non-atomized mechanical resin application equation.

6. 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.

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 Reinforces Plastic Composite 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…
An existing source	Is a major source on or before the publication date of this subpart	April 21, 2006, or you must accept and meet an enforceable HAP emissions limit below the major source threshold prior to April 21, 2006
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.
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 from the date your semi=annual compliance report indicates your facility meets or exceeds the 100 TPY threshold.
A new source	Is a major source at startup	Upon startup or April 21, 2003, whichever is later.
A new source	Is an area source at startup and becomes a major source.	Immediately upon becoming a major source.
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 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), an affected facility 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 (See Note 1)…	And the highest organic HAP content is a compliant resin or gel coat is (See Note 2)…
Open molding – corrosion resistant and/or high strength (CR/HS)	Mechanical resin application	112 lb/ton	46.2 with non-atomized resin application
	Filament application	171 lb/ton	42.0
	Manual resin application	123 lb/ton	40.0
Open molding – non CR/HS	Mechanical resin application	87 lb/ton	38.4 with non-atomized resin application
	Filament application	188 lb/ton	45.0
	Manual resin application	87 lb/ton	33.6
Open molding – tooling	Mechanical resin application	254 lb/ton	43.0 with atomized application, 91.4 with non-atomized application
	Manual resin application	157 lb/ton	45.9
Open molding – low flame spread/lo smoke products	Mechanical resin application	497 lb/ton	60.0
	Filament application	270 lb/ton	60.0
	Manual resin application	238 lb/ton	60.0
Open molding – shrinkage controlled resins	Mechanical resin application	354 lb/ton	50.0
	Filament application	215 lb/ton	50.0
	Manual resin application	180 lb/ton	50.0
Open molding – gel coat (See note 3)	Tooling gel coating	437 lb/ton	40.0
	White/off white pigmented gel coating	267 lb/ton	30.0
	All other pigmented gel coating	377 lb/ton	37.0
	CR/HS or high performance gel coat	605 lb/ton	48.0
	Fire retardant gel coat	854 lb.ton	60.0
	Clear production gel coat	822 lb/ton	44.0
Centrifugal casting - CR/HA (See Notes 4 & 5)	N/A	25 lb/ton	48.0
Centrifugal casting – non CR/HS (See Notes 4 & 5)	N/A	20 lb/ton	37.5
Pultrusion (See note 6)	N/A	Reduce total organic HAP emissions by at least 60 weight percent	N/A
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	N/A

Table 3 Notes:

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), an affected facility must meet the appropriate work practice standards in the following table:

For…	The facility 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 resins.
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 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 (See Note 1)	Keep the mixer covers closed while actual mixing is occurring except when adding materials or changing covers to the mixing vessels.
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% 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.

Table 4 Notes:

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…	Your organic HAP Emission s limit is a (See Note 1)…
Open molding – corrosion resistant and/or high strength (CR/HS)	Mechanical resin application	6 lb/ton
	Filament application	9 lb/ton
	Manual resin application	7 lb/ton
Open molding – non CR/HS	Mechanical resin application	13 lb/ton
	Filament application	10 lb/ton
	Manual resin application	5 lb/ton
	Mechanical resin application	13 lb/ton
	Manual resin application	8 lb/ton
	Mechanical resin application	25 lb/ton
	Filament application	14 lb/ton
	Manual resin application	12 lb/ton
	Mechanical resin application	18 lb/ton
	Filament application	11 lb/ton
	Manual resin application	9 lb/ton
Open molding – gel coat (See note 2)	Tooling gel coating	22 lb/ton
	White/off white pigmented gel coating	22 lb/ton
	All other pigmented gel coating	19 lb/ton
	CR/HS or high performance gel coat	31 lb/ton
	Fire retardant gel coat	43 lb/ton
	Clear production gel coat	27 lb/ton
Centrifugal casting – CR/HS (See notes 3 & 4)	A vent system that moves heated air through the mold	27 lb/ton
Centrifugal casting – non-CR/HS (See notes 3 & 4)	A vent system that moves heated air through the mold	21 lb/ton
Centrifugal casting – CR/HS (See notes 3 & 4)	A vent system that moves ambient air through the mold	2 lb/ton
Centrifugal casting – non-CR/HS (See notes 3 & 4)	A vent system that moves ambient air through the mold	1 lb/ton
SMC Manufacturing	N/A	2.4 lb/ton

Table 5 Notes:

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…
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
Each enclosure used to collect and route organic HAP emissions to an add-on control device that is not a PTE.	Determine the capture efficiency of each enclosure used to capture organic HAP emissions sent to an add-on control device	EPA methods 204B through E of Appendix M of 40 CFR Part 51, or	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.
		An alternative test method that meets the requirements in 40 CFR Part 51, Appendix M	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.
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.
Determining organic HAP emission factors for any operation	Determine the mass organic HAP emissions rate.	This 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…
CR/HS resins, centrifugal casting	CR/HS mechanical	48.0
	CR/HS filament application	48.0
	CR/HS manual	48.0
CR/HS resins, non-atomized mechanical	CR/HS filament application	46.2
	CR/HS manual	46.2
CR/HS resins, filament application	CR/HS manual	42.0
Non-CR/HS resins, filament application	Non-CR/HS mechanical	45.0
	Non-CR/HS manual	45.0
	Non-CR/HS centrifugal casting	45.0
Non-CR/HS resins, non-atomized mechanical	Non-CR/HS manual	38.4
	Non-CR/HS centrifugal casting	38.4
Non-C.HS resins, centrifugal casting	Non-CR/HS manual	37.5
Tooling resins, non-atomized mechanical	Tooling manual	91.4
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 per the following table:

For…	That must meet the following organic HAP Emissions limit…	You have demonstrated initial compliance if…
Open molding and centrifugal casting operations	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	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
		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 HPA contents, or
		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.
Open molding, centrifugal casting, continuous lamination/casting, SMC and BMC manufacturing, and mixing operations	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.
Continuous lamination/casting operations	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.
	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 testing specified 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 or organic HAP per ton of neat resin plus and neat gel coat plus.
Continuous lamination/casting operations	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.
	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.
Pultrusion operations	Reduce total organic HAP emissions by at least 60 percent by weight.	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
		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, pre-form injection, and/or wet-area enclosures that meet the criteria of 63.5830
Pultrusion operations	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 add-on control device destruction efficiency testing specified in Table 6 to this subpart, are reduced by at least 95 percent 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 per the following table:

For…	That must meet the following standard…	You have demonstrated initial compliance if…
A new or existing closed or molding operation using compression/injection molding	Uncover, unwrap or expose only on 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.
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 form application equipment. Application equipment includes any equipment that directly contacts resins between storage and applying resin to the mold or reinforcement.	The owner/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.
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/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.
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/operator submits a certified statement in the notice of compliance status that the resin delivery system is closed or covered.
An existing or new SMC manufacturing operation	Use nylon containing film to enclose SMC	The owner/operator submits a certified statement in the notice of compliance status that a nylon-containing film is used to enclose SMC.
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/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.
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/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.
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/operator submits a certified statement in the notice of compliance status that mixers closed except when adding materials to the mixing vessels
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 reduction requirement.	Not allow vents from the building ventilation system, or local or portable fans to blow directly on or across the wet-out area(s),	The owner/operator submits a certified statement in the notice of compliance status that they have complied with all the requirements listed in this section of Table 9.
	Not permit point suction of ambient air in the wet-out areas unless that air is directed to a control device,	
	Use devices such as deflectors, baffles, and curtains when practical to reduce air flow velocity across wet-out areas,	
	Direct any compressed air exhausts away from resin and wet-out areas,	
	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 form the ambient air,	
	Cover all reservoirs, tanks, sumps or HAP containing materials storage vessels except when they are being charged or filled, and	
	Cover or shield from ambient air resin delivery systems to the wet-out areas from reservoirs, tanks or sumps where practical.	

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…
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	Is uncontrolled	Annual uncontrolled wet-out area organic HAP emissions,
		Annual controlled wet-out area organic HAP emissions,
		Annual uncontrolled oven organic HAP emissions,
		The capture efficiency of the wet-out area enclosure,
		The destruction efficiency of the add-on control device, and
		The amount of neat resin plus and neat gel coat plus applied.
Has an enclosure that is a PTE and the captured organic HAP emissions are controlled by an add-on control device	Is controlled by an add-on control device	Annual uncontrolled wet-out area organic HAP emissions,
		Annual controlled wet-out area organic HAP emissions,
		Annual uncontrolled oven organic HAP emissions,
		That the wet-out area enclosure meets the requirements of EPA method 204 of Appendix M to 40 CFR Part 51 for a PTE,
		The destruction efficiency of the add-on control device, and
		The amount of neat resin plus and neat gel coat plus applied.
Is uncontrolled	Is controlled by an add-on control device	Annual uncontrolled wet-out area organic HAP emissions,
		Annual uncontrolled oven organic HAP emissions,
		Annual controlled oven organic HAP emissions,
		The capture efficiency of the oven,
		The destruction efficiency of the add –on control device, and
		The amount of neat resin plus and neat gel coat plus applied.
Has an enclosure that is not a PTE and the captured organic HAP emissions are controlled by an add-on control device	Is controlled by an add-on control device	Annual uncontrolled wet-out area organic HAP emissions,
		Annual controlled wet-out area organic HAP emissions,
		Annual uncontrolled oven organic HAP emissions,
		Annual controlled oven organic HAP emissions,
		The capture efficiency of the wet-out area enclosure,
		Inlet organic HAP emissions to the add-on control device,
		Outlet organic HAP emissions from the add-on control device, and
		The amount of neat resin plus and neat gel coat plus applied.
Has an enclosure that is a PTE and the captured organic HAP emissions are controlled by an add-on control device.	Is controlled by an add-on control device	That the wet-out area enclosure meets the requirements of EPA Method 204 of Appendix M to 40 CFR Part 51 for a PTE
		The capture efficiency of the oven, and
		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…
Wet-out area	Is uncontrolled	Annual uncontrolled wet-out area organic HAP emissions.
Wet-out area	Has an enclosure that is not a PTE	The capture efficiency of the enclosure, and
		Annual organic HAP emissions that escape the enclosure
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.
Oven	Is uncontrolled	Annual uncontrolled oven organic HAP emissions.
Line	Is controlled or uncontrolled	The amount of neat resin plus applied, and
		The amount of neat gel coat plus applied.
Add-on control device		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 lb/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…
Is uncontrolled	Is uncontrolled	Annual uncontrolled wet-out area organic HAP emissions,
		Annual uncontrolled oven organic HAP emissions, and
		Annual neat resin plus and neat gel coat plus applied.
Has an enclosure that is not a PTE and the captured organic HAP emissions are controlled by an add-on control device	Is uncontrolled	Annual uncontrolled wet-out area organic HAP emissions,
		Annual controlled wet-out area organic HAP emissions,
		Annual uncontrolled oven organic HAP emissions,
		The capture efficiency of the wet-out area enclosure,
		The destruction efficiency of the add-on control device, and
		The amount of neat resin plus and neat gel coat plus applied
Has an enclosure that is a PTE, and the captured organic HAP emissions are controlled by an add-on control device	Is uncontrolled	Annual uncontrolled wet-out area organic HAP emissions,
		Annual controlled wet-out area organic HAP emissions,
		Annual uncontrolled oven organic HAP emissions,
		That the wet-out area enclosure meets the requirements of EPA Method 204 of Appendix M to 40 CFR part 51 for a PTE,
		The destruction efficiency of the add-on control device, and
		The amount of neat resin plus and neat gel coat plus applied.
Is uncontrolled	Is controlled by an add-on control device	Annual uncontrolled wet-out area organic HAP emissions,
		Annual uncontrolled oven organic HAP emissions,
		Annual controlled oven organic HAP emissions,
		The capture efficiency of the oven,
		The destruction efficiency of the add-on control device, and
		The amount of neat resin plus and neat gel coat plus applied.
Has an enclosure that is not a PTE and the captured organic HAP emissions are controlled by an add-on control device	Is controlled by an add-on control device	Annual uncontrolled wet-out area organic HAP emissions,
		Annual controlled wet-out area organic HAP emissions,
		Annual uncontrolled oven organic HAP emissions,
		Annual controlled oven organic HAP emissions,
		The capture efficiency of the wet-out area enclosure,
		The capture efficiency of the oven,
		The destruction efficiency of the add-on control device, and
		The amount of neat resin plus and neat gel coat plus applied.
Has an enclosure that is a PTE, and the captured organic HAP emissions are controlled by add-on control device	Is controlled by an add-on control device	That the wet-out area enclosure meets the requirements of EPA Method 204 of Appendix M to 40 CFR Part 51 for a PTE,
		The capture efficiency of the oven,
		Inlet organic HAP emissions to the add-on control device, and
		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…
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).
Is a new source subject to this subpart	The notifications specified in 63.9(b)(4) and (5)	No later than the dates specified in 63.9(b)(4) and (5)
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)
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 dates
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.
Is complying by using an add-on control device.	A notification of intent to conduct a performance test as specified in 63.9(a)	No later than the date specified in 63.9(e)
	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.
	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…	The report must contain…	You must submit the report…
A compliance report	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).
	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).
	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).
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.	Actions taken for the event	By fax or telephone within 2 working days after starting actions inconsistent with the plan
	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 WWW of Part 63 – Applicability of General Provisions (Subpart A)

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

General Provision Reference	That addresses…	Applies to Subpart?	Subject to the following additional information…
63.1(a) (1)	General applicability of the general provisions	Yes	If overlap with general provisions, Subpart WWWW takes precedence.
63.1 (a) (2) – (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) – (9)	Reserved	No	
63.1 (a) (10) – (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) – (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	Additional items defined in 63.5935. If overlap with general provisions, Subpart WWWW takes precedence.
63.3	Units and abbreviations	Yes	Others units and abbreviations in Subpart WWWW of Part 63.
63.4	Prohibited activities and circumvention	Yes	63.4 (a) (3) – (5) is reserved and does not apply.
63.5 (a) (1) – (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) (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) – (5)	Approval of construction or reconstruction	Yes	
63.5 (f) (1) – (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	

General Provision Reference	That addresses…	Applies to Subpart?	Subject to the following additional information…
63.6 (a) (2)	Applicability of area sources that increase HAP emissions to become major sources	Yes	
63.6 (b) (1) – (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) – (2)	Compliance dates for existing sources	Yes	Subpart WWWW of Part 63 clarifies compliance dates in 63.5800
63.6 (c) (3) – (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) – (2)	Operation and maintenance requirements	Yes	
63.6 (e) (3)	Startup, shutdown and malfunction plan and record keeping	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) – (3)	Methods for determining compliance	Yes	
63.6 (g) (1) – (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) – (14)	Compliance extensions	Yes	
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 63 initial 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 of 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 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, record keeping and reporting	Yes	
63.7 (h)	Waiver of performance tests	Yes	
63.8 (a) (1) – (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) – (3)	Multiple effluents and multiple monitoring systems	Yes	

General Provision Reference	That addresses…	Applies to Subpart?	Subject to the following additional information…
63.8 (c) (1)	Compliance with CMS operation and maintenance requirements	Yes	This section applies if you elect to use a CMS to demonstrated continuous compliance with an emission limit
63.8 (c) (2) – (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) – (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) – (4)	EMS 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) – (3)	Use of any 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	
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) – (5)	Data reduction	Yes	
63.9 (a) (1) – (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)	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) – (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

General Provision Reference	That addresses…	Applies to Subpart?	Subject to the following additional information…
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) – (3)	Notification of compliance status	Yes	
63.9 (h) (4)	Reserved	No	
63.9 (h) (5) – (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 record keeping and reporting	Yes	
63.10 (b) (1)	Records retention	Yes	
63.10 (b) (2) (i) – (v)	Records related to startup, shutdown and malfunction	Yes	Only applies to facilities that us an add-on control device
63.10 (b) (2) (vi) – (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 record keeping 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 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
63.10 (c) (2) – (4)	Reserved	No	
63.10 (c) (5) – (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) – (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) – (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

General Provision Reference	That addresses…	Applies to Subpart?	Subject to the following additional information…
63.10 (f)	Waiver for recordkeeping/reporting		
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	Incorporation by reference	Yes	
63.15	Availability of information and confidentiality	Yes	

XV. Startup, Shutdown and Malfunction (SSM) Plan Checklist

The following is a Summary of Requirements for MACT Standard's Startup, Shutdown, and Malfunction Plans. This document was originally prepared in September 2003 by EC/R Incorporated for the U.S. Environmental Protection Agency and is only a tool for assessing a facility's plan.

It should be noted that on April 20, 2006, EPA issued a final amendment to the general provisions of the national emissions standards for hazardous air pollutants (NESHAP) and other specific national emissions standards affecting the SSM plan requirements. An SSM plan is still required, as applicable, however, a source in now allowed to deviate from its SSM plan in order to have more flexibility to address emissions during such SSM periods. However, sources must still operate to minimize emissions during periods of startup, shutdown and malfunction. Refer to http://www.epa.gov/ttn/oarpg/t3/fact_sheets/genprov_fs.html for additional details.

1. What is meant by Startup, Shutdown and Malfunction?

- ***Startup*** is defined as "setting in operation of an affected source or portion of an affected source for any purpose" (40 CFR 63.2). Startup is what you do when you start your process equipment.

- ***Shutdown*** is defined as "the cessation of operation of an affected source or portion of an affected source for any purpose" (40 CFR 63.2). Shutdown is what you do when you turn your process equipment off.

- ***Malfunction*** is defined as "any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions" (40 CFR 63.2). A malfunction is what happens when your equipment stops working properly because of unforeseeable equipment or other process-related failure. It does not include what happens to your equipment if you fail to maintain the equipment properly or are careless during operation so that the equipment breaks down or stops working properly.

2. What requires a facility to prepare a SSM Plan?

The Federal air pollution control requirements published by the EPA require owners and operators of MACT sources to write and put into use a Startup, Shutdown, and Malfunction Plan (SSM Plan). See Section 63.6(e)(3)(i) of the EPA "General Provisions" for these requirements.

3. What is the purpose of a SSM Plan?

The purpose of the SSM Plan is to make sure that:

- A facility runs (and keep in good running order) their MACT sources so that the facility's air emissions are minimized during all startups, shutdowns, and malfunctions (SSM) to the greatest extent which is consistent with safety and good air pollution control practices [§63.6(e)(3)(i)(A)];

- A facility is ready to correct (for example, repair) malfunctions as soon as practical after they happen so as to minimize any emissions that might occur as a result of the malfunction (§63.6(e)(3)(i)(B)); and

- A facility's reporting duty is simplified when a SSM happens since the procedures followed during the startup or shutdown or to correct a malfunction are already described in a SSM Plan [§63.6(e)(3)(i)(C)].

1. When must an SSM Plan be developed?

An SSM Plan must be developed by the compliance date of a facility's NESHAP [§63(e)(3)(i)] or as otherwise specified for its MACT source.

2. What information should an SSM Plan contain?

An SSM Plan should describe how a facility is going to startup and shutdown the MACT source. The SSM Plan should also describe how the facility will handle malfunctions of its processes to minimize emissions, as well as malfunctions of the devices that control and monitor the emissions from regulated air pollution sources including continuous emissions monitoring systems (CEMS) [§63.6(e)(3)].

A facility's SSM Plan should describe the information listed below [§63.6(e)(3)]:

- How the facility plans to operate, or in other words, how the facility will run the MACT process equipment during startups and shutdowns to minimize emissions;
- How the facility plans to operate the MACT source during malfunctions to minimize emissions; and
- How the facility plan's to correct/repair malfunctioning equipment as soon as practical after malfunctions occur.

It may also be helpful to address in the SSM Plan the information that will be recorded during each SSM [§§63.6(e)(3) and 63.10(b)]. See Item 9 of this document for the list of information that needs to be recorded. The records may take the form of a "checklist" or any other type of recordkeeping that keeps track of the same information [§§63.6(e)(3)(iii) and 63.10(b)(2)(v)].

A facility may use a standard operating procedures (SOP) manual, an Occupational Safety and Health Administration (OSHA) plan, or other plan to satisfy the requirements for writing a SSM Plan as long as the other plan meets all the requirements of a SSM Plan, as described here [§63.6(e)(3)(vi)]. Some MACT sources reference portions of their SOP manual in their SSM Plan.

3. When is a facility required to use a SSM Plan?

A facility must use the SSM Plan during all SSM occurrences of their MACT sources, and run and keep in good running order the MACT source using the procedures described in the SSM Plan [§63.6(e)(3)(ii)]. If it is impracticable in a given situation to follow the procedures in the SSM plan, newly promulgated amendments to the general provisions allows the flexibility to deviate from the SSM plan. See http://www.epa.gov/ttn/oarpg/t3/fact_sheets/genprov_fs.html for additional details.

4. Who sees the SSM Plan and how long should it be kept?

- A facility's SSM Plan is a public document and may be requested by the public. You must submit your plan to your permitting authority when asked to do so in response to a request from the public. It may also need to be submitted as required by the NESHAP for your source.

- Under a facility's permit required by Title V (part 70 and 71) of the 1990 Clean Air Act

Amendments facilities are required to have an SSM plan. The Title V permit also requires facilities to follow the procedures in their SSM Plan during all times of startups, shutdowns, and malfunctions as they operate the equipment at their facility. Revisions made to an SSM Plan are not considered Title V permit revisions. Also, none of the procedures in the SSM Plan fall within the "permit shield" provision in Section 504(f) of the Clean Air Act [§63.6(e)(3)(ix)].

- Facilities should keep a copy of their SSM Plan in a safe place with other important records so that it can be read or copied by EPA or any other regulatory agency for as long as they continue to operate their MACT processes and for five (5) years after they stop operating the process [§63.6(e)(3)(v)].

- If an SSM Plan is ever revised, facilities should also keep the previous versions for five (5) years afterwards so that it can be available to EPA or any other regulatory agency and the public [§63.6(e)(3)(v)].

8. When must a facility modify the SSM Plan?

A facility must modify their current SSM Plan in the following situations:

- To reflect changes to MACT operations or SSM procedures since the SSM Plan was last prepared [§63.6(e)(viii)]; and
- If the current SSM Plan:
    - Does not include instructions for a SSM that has occurred [§63.6(e)(3)(vii)(A)];
    - Does not include instructions for what will be done during a SSM -- i.e., safe procedures and good air pollution control practices that minimize emissions to the greatest extent [§63.6(e)(3)(vii)(B)];
    - Does not include enough instructions for correcting/repairing the malfunctioning process, air pollution control, or monitoring equipment as quickly as practical (§63.6(e)(3)(vii)(C)); or
    - Includes instructions for anything that is not a SS&M, as defined above (§63.6(e)(3)(vii)(D));

Note: If the current SSM Plan leaves out or does not include enough instructions to correctly handle any incident that occurs that can be called a malfunction, the facility must revise its SSM Plan within 45 days after the incident. The facility must add to the revised SSM Plan information on what will be done in case this type of incident happens again [§63.6(e)(3)(viii)]. Depending on what the SSM Plan revisions are, the permitting authority and/or EPA may ask to see a copy of the revised SSM Plan. If the facility revises its SSM Plan, it must report that the SSM Plan has been revised in the next semiannual SSM Report for its NESHAP (or Title V) compliance certification. These reports are typically due within 60 days following the end of each 6-month period [§§63.6(e)(viii) and 63.10(d)(5)(i); §70.5(c)(9)], although the permitting authority can approve less frequent reporting in some cases. If the revisions to the SSM Plan include changes to the scope of activities considered to be SSM events or otherwise changes how any emission limit, work practice requirement, or other requirement in your NESHAP will apply to the facility, the revised SSM Plan is not effective until the permitting authority receives written notice from the facility describing these SSM Plan revisions [§63.6(e)(3)(viii)]. Until then, continue following the existing approved SSM Plan.

9. Does a facility have to keep any SSM records?

A facility is required to keep the following records (including all reports and notifications) for five years (§§63.6(e)(3) and 63.10(b)(2)):

- When and how long each malfunction of MACT operations, or air pollution control and monitoring equipment happened;
- What was done to correct/repair the malfunctioning equipment;

- Whether the facility followed their current SSM Plan;
- What was done, if at all, that was different from what is in the current SSM Plan; and
- Any other information required by the facility's NESHAP, such as the cause of the malfunctions.

10. Does a facility have to submit SSM Reports?

If you revise your SSM Plan to reflect changes to your MACT source operation or procedures, you must report that you have revised your SSM Plan in your next semiannual SSM Report for your NESHAP (or Title V compliance certification) which is typically due within 60 days following the end of each 6-month period (§§63.6(e)(viii) and 63.10(d)(5)(i); §70.5(c)(9)).

If a SSM occurs and you correctly followed the procedures in your SSM Plan, you must submit the following in a letter in your next semiannual SSM Report, due within 60 days following the end of each 6-month period (§§63.6(e)(iii) and 63.10(d)(5)(i)):

- Facility contact name and title;
- Certifying signature of the owner/operator or other responsible official;
- Statement that current SSM Plan was followed or deviation occurred; and
- How many SSM happened, how long the SSM were, and a brief description of each SSM. (Note: This information may take the form of a checklist)

If what you did during a SSM was not as written in your SSM Plan and/or the type of SSM was not covered by your current SSM Plan and your source exceeds any of the applicable emission limitations in the relevant standard, you must report exactly what your actions were and/or the type of SSM that occurred by telephone or facsimile (FAX) transmission within two (2) working days afterwards. Also, you must send a letter within seven (7) working days after the end of the SSM. The letter should include the following information (§§63.6(e)(3)(iv) and 63.10(d)(5)(ii)):

- Facility contact name and title;
- Certifying signature of the owner/operator or other responsible official;
- How the recent SSM happened;
- What was done during the SSM;
- The reason(s) that current SSM Plan was not followed; and
- Whether any emissions and/or parameters that were monitored were higher or different than their allowable values during the SSM.

If, as above, what was done during a SSM was not as written in the current SSM Plan and/or the type of event was not covered by the current SSM Plan, the facility must also revise the SSM Plan within 45 days after the SSM so as to describe what will be done in case a similar SSM happens again.

A facility may also have reports to make that are required by the State Implementation Plan (SIP). Check with local permitting authority to find out about these additional requirements.

11. Startup, Shutdown and Malfunction (SSM) Plan Checklist:

a. Has the facility described what will be done to operate, in other words, how the facility run all **process equipment** at the MACT sources during **startups and shutdowns** to minimize emissions?
b. Has the facility included how they will record what will be done during a **startup or shutdown** if this information is not already included in the plan?

c. Has the facility included what they will do to find and record the circumstances of malfunctions of the **process, air pollution control, and air pollution monitoring** equipment?

d. Has the facility included what they will do to correct (for example, repair) the malfunctioning **process, air pollution control, and air pollution monitoring** equipment as soon as practical after the malfunctions happens to minimize emissions, and how they will record these corrections?

e. Has the facility included how they will obtain any other information required by the applicable NESHAP, such as the cause of the malfunction?

Note: This is the least amount of information that a facility should have in their SSM Plan. The facility can include more information so that employees can operate the facility as best as possible during any startup, shutdown, or malfunction. They may also include any or all of the following as additional requirements: (1) the SSM Plan should be kept in a place where everyone who operates any equipment can find it quickly; (2) a manager should sign off any SSM Plan revisions and be notified of each SSM; or (3) all employees must be trained in the SSM procedures.

12. Sample SSM Recordkeeping Checklist:

a. At what piece of equipment or where in the process did the startup, shutdown, or malfunction occur?

b. What was the date and time of the startup and how long did it last?

c. What was the date and time of the shutdown and how long did it last?

d. What was the date and time of the malfunction and how long did it last?

e. What did you do to correct the malfunctioning equipment?

f. Is what was done during the startup, shutdown, or malfunction exactly as described in the SSM Plan?

g. If the facility did anything that was not in the current SSM Plan, what was the result?

h. Did the facility include all other information required by the applicable NESHAP, such as the cause of the malfunctions?

Note: This is the least amount of information that a facility should write down during any startup, shutdown, and malfunctions. The facility can include more information so that they can describe as best as possible what happened during any startup, shutdown, or malfunction.