

**Inspector Checklist for
The Miscellaneous Coating Manufacturing Maximum Achievable Control
Technologies (MACT)**

**National Emission Standards for Hazardous Air Pollutants (NESHAP):
Miscellaneous Coating Manufacturing
40 CFR Parts 63.7980 – 63.8105 or Subpart HHHHH
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 miscellaneous coating manufacturing at major sources of HAP emissions. Requirements to demonstrate initial and continuous compliance with these limitations have also been established. **This checklist refers often to requirements in other sections of Subpart 63 that affected facilities must comply with.**

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.

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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 the facility subject to the Miscellaneous Coating Manufacturing NESHAP? [63.7985 - 63.7990](#)

- Does the facility manufacture coatings (see coating definition in 63.8105)? Yes No NA
- Does the manufacturing operations include the facility-wide collection of equipment listed below:
- Process vessels, Yes No NA
 - Storage tanks for feed stocks and products Yes No NA

- Components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems. Yes No NA
- Wastewater tanks and transfer racks. Yes No NA

Note: If the predominant use of a transfer rack loading arm or storage tank (including storage tanks in series) is associated with miscellaneous coating manufacturing, and the loading arm or storage tank is not part of an affected source under a subpart of this part 63, then the facility must assign the loading arm or storage tank to the miscellaneous coating manufacturing operations.

If the predominant use cannot be determined, and the loading arm or storage tank is not part of an affected source under a subpart of this part 63, then the facility must assign the loading arm or storage tank to the miscellaneous coating manufacturing operations.

If the use varies from year to year, then the facility must base the determination on the utilization that occurred during the year preceding December 11, 2003 or, if the loading arm or storage tank was not in operation during that year, they must base the use on the expected use for the first 5-year period after startup.

The facility must include the determination in the notification of compliance status report specified in 63.8075(d) and must re-determine the predominant use at least once every 5 years after the compliance date

- Is the facility located at or is part of a major source of hazardous air pollutants (HAP) emissions, as defined in section 112(a) of the Clean Air Act (CAA)? Yes No NA
- Does the facility process, use or produce HAP? Yes No NA
- Is the facility not part of an affected source under another subpart of this part 63? Yes No NA
- Is the facility subject to the requirements of this subpart (**the facility is subject to this subpart if yes to all above**)? Yes No NA
- Does the facility have any sources in which this subpart do not apply (i.e. exempt sources):
 - Research and development facilities, as defined in section 112(c)(7) of the CAA. Yes No NA
 - Affiliated operations located at an affected source under Subparts GG (National Emission Standards for Aerospace Manufacturing and Rework Facilities), KK (National Emission Standards for the Printing and Publishing Industry), JJJJ (NESHAP: Paper and Other Web Coating), future MMMM (National Emission Standards for Miscellaneous Metal Parts and Products Surface Coating Operations) and SSSS (NESHAP: Surface Coating of Metal Coil) of 40 CFR part 63. Affiliated operations include, but are not limited to, mixing or dissolving of coating ingredients; coating mixing for viscosity adjustment, color tint or additive blending, or pH adjustment; cleaning of coating lines and coating line parts; handling and storage of coatings and solvent; and conveyance and treatment of wastewater. Yes No NA
 - Ancillary equipment such as boilers and incinerators (only those not used to comply with the emission limits in Tables 1 through 5 to this subpart), chillers and refrigeration systems, and other equipment that is not directly involved in the manufacturing of a coating (i.e., it operates as

a closed system, and materials are not combined with materials used to manufacture the coating). Yes No NA

Quality assurance/quality control laboratories. Yes No NA

Modifying a purchased coating in preparation for application at the purchasing facility. 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

III. Compliance Dates

4. Has the facility met the compliance dates? 63.7995

If the facility has a new affected source that was started up before December 11, 2003, did they comply with the requirements for new sources no later than December 11, 2003? Yes No NA

If the facility has a new affected source that was started up after December 11, 2003, did they comply with the requirements for new sources upon startup of the affected source? Yes No NA

If the facility had an existing affected source on December 11, 2003, did they comply with the requirements for existing sources no later than December 11, 2006? Yes No NA

Did the facility meet the notification requirements in 63.8070 according to the schedule in 63.8070 and in 40 CFR Part 63, Subpart A? Yes No NA

Note: Some of the notifications must be submitted before the facility is required to comply with the emission limits, operating limits, and work practice standards in this subpart.

IV. Emission Limits, Work Practice Standards and Compliance Requirements

Note: An affected source must be in compliance with the emission limits and work practice standards in Tables 1 through 5 at all times, except during periods of startup, shutdown, and malfunction

5. Has the facility complied with the general requirements of this rule? 63.8000

General Compliance

- If the facility has an emission stream that contains halogen atoms and they use a combustion-based control device (excluding a flare) to meet an organic HAP emission limit, have they determined whether the emission stream meets the definition of a halogenated stream? Yes No NA
 - Or, alternatively, did they elect to designate the emission stream as halogenated? Yes No NA

- If the facility uses a control device to comply with an emission limit in Table 1, 2, or 5, did they comply with the following requirements, unless excepted:
 - If the facility reduced organic HAP emissions by venting emissions through a closed-vent system to any combination of control devices (except a flare), did they meet the requirements of 63.982(c)? Yes No NA
 - If the facility reduced organic HAP emissions by venting emissions through a closed-vent system to a flare, did they meet the requirements of 63.982(b)? [Note: A flare may not be used to control halogenated vent streams or hydrogen halide and halogen HAP emissions.] Yes No NA
 - If the facility uses a halogen reduction device to reduce hydrogen halide and halogen HAP emissions that are generated by combusting halogenated vent streams, did they meet the requirements of 63.994? Yes No NA
 - If the facility used a halogen reduction device before a combustion device, did they determine the halogen atom emission rate prior to the combustion device according to the procedures in 63.115(d)(2)(v)? Yes No NA

Exceptions to Requirements for performance tests

- Did the facility comply with any of the requirements specified below instead of or in addition to the requirements for performance testing of control devices as specified in subpart SS of 40 CFR Part 63:
 - Did the facility conduct gas molecular weight analysis using Method 3, 3A, or 3B in appendix A to 40 CFR Part 60? Yes No NA
 - Did the facility measure moisture content of the stack gas using Method 4 in appendix A to 40 CFR Part 60? Yes No NA
 - As an alternative to using Method 18, Method 25/25A, or Method 26/26A of 40 CFR part 60, appendix A, to comply with any of the emission limits specified in Tables 1 through 6 to this subpart, did the facility use Method 320 of 40 CFR part 60, appendix A? Yes No NA
 - When using Method 320, did the facility follow the analyte spiking procedures of section 13 of Method 320, unless they demonstrated that the complete spiking procedure had been conducted at a similar source? Yes No NA
 - For the purposes of this subpart, were the results of all initial compliance demonstrations included in the notification of compliance status report, which is due 150 days after the compliance date? Yes No NA
 - If the facility does not have a closed-vent system, did they determine capture efficiency using Method 204 of appendix M to 40 CFR Part 51 for all stationary process vessels subject to requirements of Table 1 to this subpart? Yes No NA

Design evaluation

- To determine the percent reduction of a small control device, did the facility elect to conduct a design evaluation as specified in 63.1257(a)(1) instead of a performance test as specified in subpart SS of 40 CFR part 63. Yes No NA
 - If yes, did the facility establish the value(s) and basis for the operating limits as part of the design evaluation? Yes No NA

Periodic verification

- If the facility has a control device with total inlet HAP emissions less than 1 ton per year (tpy), did they establish operating limits for the parameters that they will measure and record at least once per averaging period to verify that the control device is operating properly? [Note: The facility may elect to measure the same parameter that is required for control devices that control inlet HAP emissions equal to or greater than 1 tpy.] Yes No NA
- If the parameter will not be measured continuously, did the facility request approval of their proposed procedure in the pre-compliance report? Yes No NA
 - Did they identify the operating limit(s) and the measurement frequency, and Yes No NA
 - Did they provide rationale to support how the measurements demonstrate the control device is operating properly? Yes No NA

Continuous emissions monitoring systems (CEMS)

- Has the facility installed, operated, and maintained each CEMS according to the applicable Performance Specification, except as noted below? Yes No NA

Note: If the facility wishes to use a CEMS other than a Fourier Transform Infrared Spectroscopy (FTIR) to meet the requirements of the Performance Specification for measuring hydrogen halide and halogen HAP before EPA promulgates a Performance Specification for such CEMS, the facility must prepare a monitoring plan and submit it for approval in accordance with the procedures specified in 63.8.

- For any CEMS meeting Performance Specification 8, did the facility also comply with Appendix F, Procedure 1 of 40 CFR Part 60? Yes No NA
- Did the facility determine the calibration gases and reporting units for TOC (total organic carbon) CEMS in accordance the following requirements:
 - Determine the target analyte(s) for calibration using either process knowledge of the control device inlet stream or the screening procedures of Method 18 on the control device inlet stream for CEMS meeting Performance Specification 9 or 15 requirements? Yes No NA
 - Calibrate the instrument on the predominant organic HAP and report the results as carbon (C₁), and use Method 25A or any approved alternative as the reference method for the relative

accuracy tests for CEMS meeting Performance Specification 8 used to monitor performance of a combustion device? Yes No NA

- Determine the predominant organic HAP using either process knowledge or the screening procedures of Method 18 on the control device inlet stream, calibrate the monitor on the predominant organic HAP, and report the results as C₁. Use Method 18, ASTM D6420-99, or any approved alternative as the reference method for the relative accuracy tests, and report the results as C₁ for CEMS meeting Performance Specification 8 used to monitor performance of a non-combustion device? Yes No NA
- Did the facility conduct a performance evaluation of each CEMS according to the requirements in 40 CFR 63.8 and according to the applicable Performance Specification of 40 CFR part 60, appendix B, unless excepted? Yes No NA
 - Did the facility include the results of the performance evaluation in the notification of compliance status report? Yes No NA
- Did the facility reduce the CEMS data to operating day or operating block averages computed using valid data consistent with the data availability requirements? [Note: An operating block is a period of time from the beginning to end of batch operations in the manufacturing of a coating. Operating block averages may be used only for process vessel data.] Yes No NA

Continuous parameter monitoring system (CPMS)

Note: The following provisions apply in addition to the requirements for continuous parameter monitoring system (CPMS) in subpart SS of 40 CFR part 63.

- Did the facility record the results of each calibration check and all maintenance performed on the CPMS? Yes No NA
- As an alternative to measuring pH, did the facility elect to continuously monitor the caustic strength of the scrubber effluent? Yes No NA

7. Is the facility complying with requirements applicable to their process vessels? 63.8005

Note: The facility must meet each applicable emission limit and work practice standard in Table 1, and must meet each applicable general requirement, except as specified. Facilities are not required to meet the emission limits and work practice standards in Table 1 if they comply with 63.8050 or 63.8055.

- For automatic cleaning operations, is the facility meeting the emission limits and work practice standards in Table 1 (Cleaning operations that are conducted manually do not have to meet these requirements)? Yes No NA
- Does the facility use control devices to comply with Table 1 standards? Yes No NA
 - If yes, for each control device used does the facility comply with Part 63 Subpart SS as applicable? Yes No NA
- To demonstrate initial compliance with a percent reduction emission limit in Table 1 did the facility complete the following requirements:
 - Conduct the performance test or design evaluation using proper protocol [see 63.7(e)(1)], and under worst-case conditions? Yes No NA

- For a control device used to control emissions from process vessels, conduct performance test according to requirements specified in 63.1257(b)(8), including the submittal of a site-specific test plan for approval prior to testing? [Note: The requirements in 63.997(e)(1)(i) and (iii) also do not apply for performance tests conducted to determine compliance with the emission limits for process vessels.] Yes No NA
- For the initial compliance demonstration for condensers, determine uncontrolled emissions using the procedures specified in 63.1257(d)(2), and determine controlled emissions using the procedures specified in 63.1257(d)(3)(i)(B) and (iii). Yes No NA
- Demonstrate that each process condenser is properly operated according to specified procedures [see 63.1257(d)(2)(i) (C)(4)(ii) and (d)(3)(iii)(B)]. Yes No NA
 - As an alternative to measuring the exhaust gas temperature, did the facility elect to measure the liquid temperature in the receiver? Yes No NA
- Conduct a performance test or compliance demonstration equivalent to an initial compliance demonstration within 360 hours of a change in operating conditions that are not considered to be within the previously established worst-case conditions? Yes No NA
- Has the facility established operating limits under the conditions required for initial compliance? Yes No NA
 - Did the facility elect to base the operating limits on the results of the performance test and supplementary information such as engineering assessments and manufacturer's recommendations? Yes No NA
 - Were the operating limits established for conditions as unique as individual emission episodes? Yes No NA
 - If yes, did the facility provide rationale in the pre-compliance report for the specific level for each operating limit, including any data and calculations used to develop the limit and a description of why the limit indicates proper operation of the control device. Yes No NA
 - Did the facility elect to establish separate operating limits for different emission episodes? Yes No NA
 - If yes, did the facility maintain the appropriate records [see 63.8085(g)] for each point at which there was a change from one operating limit to another, even if the duration of the monitoring for an operating limit is less than 15 minutes? Yes No NA
 - Did the facility have these procedures reviewed and approved by the Administrator? Yes No NA
- Did the facility establish separate operating limits for different emission episodes? Yes No NA
 - If yes, did they elect to determine operating block averages instead of the daily averages? Yes No NA

Note: An **operating block** is a period of time that is equal to the time from the beginning to end of an emission episode or sequence of emission episodes.

- If flow to a control device could be intermittent, did the facility install, calibrate, and operate a flow indicator at the inlet or outlet of the control device to identify periods of no flow. Note that periods of no flow may not be used in daily or block averages, but may not be used in fulfilling a minimum data availability requirement. Yes No NA

8. Is the facility complying with requirements applicable to their storage tanks? 63.8010

- Unless excepted, has the facility met each emission limit in Table 2 to this subpart that applies to their storage tanks, and Yes No NA
- Has the facility met each applicable requirement specified in 63.8000(b)? Yes No NA
- For each control device used to comply with Table 2 to this subpart, did the facility comply with Subpart SS of this part 63 as specified in 63.8000(c), unless excepted? Yes No NA

Note: The Inspector should determine if the facility is taking advantage to any of the exceptions to Part 63 Subparts SS and WW.

- If the facility conducted a performance test or design evaluation for a control device used to control emissions only from storage tanks, did they establish operating limits, conduct monitoring, and keep records using the same procedures as required in subpart SS of this part 63 for control devices used to reduce emissions from process vents? Yes No NA
- The emission limits in Table 2 to this subpart for control devices used to control emissions from storage tanks do not apply during periods of planned routine maintenance. Did the facility have periods of planned routine maintenance of each control device, during which the control device did not meet the emission limit specified in Table 2 to this subpart and the maintenance period did not exceed 240 hours per year (hr/yr)? **[Note: A facility may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed, it must indicate that no material will be added to the storage tank between the time the 240 hr/yr limit is exceeded and the control device is again operational, and it must be submitted at least 60 days before the 240 hr/yr limit will be exceeded.]** Yes No NA
- As an alternative to the emission limits specified in Table 2 to this subpart, did the facility elect to implement vapor balancing [see 63.1253(f)], as applicable? Yes No NA

9. Is the facility complying with requirements applicable to their equipment leaks? 63.8015

- Has the facility met each requirement in Table 3 to this subpart that applies to their equipment leaks, unless excepted [see 63.424(a) for exceptions]? Yes No NA

10. Is the facility complying with requirements applicable to their wastewater streams? 63.8020

- Did the facility meet each requirement in Table 4 to this subpart that applies to their wastewater streams, and Yes No NA
- Did the facility meet each applicable general requirement specified in 63.8000? Yes No NA
- For each wastewater stream generated, did the facility either designate the wastewater stream as a Group 1 wastewater stream according applicable procedures:
 - Designate any wastewater stream as a Group 1 wastewater stream (Determining the concentration for any designated Group 1 wastewater stream is not necessary). Yes No NA
 - For wastewater streams not designated as Group 1 wastewater streams, did the facility use the procedures specified in 63.144(b) to establish the concentrations? Yes No NA
- For each enhanced biological treatment unit used to comply with the requirements in Table 4, did the facility monitor total suspended solids (TSS), biological oxygen demand (BOD), and the biomass concentration? Yes No NA
 - In the pre-compliance report, did they identify and provide rationale for proposed operating limits for these parameters, methods for monitoring, the frequency of monitoring, and recordkeeping and reporting procedures that will demonstrate proper operation of the enhanced biological treatment unit, or Yes No NA
 - Alternatively, did they use the pre-compliance report to request to monitor other parameters, and include a description of planned reporting and recordkeeping procedures and the basis for the selected monitoring frequencies and the methods that will be used? Yes No NA
- If the facility transferred the wastewater offsite for enhanced biological treatment, did they obtain written certification from the offsite facility stating that the offsite facility would comply with the requirements of this subpart? **[Note: The certifying entity may revoke the certification by providing 90 days notice. Upon expiration of the notice period, a facility may not transfer wastewater to that treatment facility.]** Yes No NA

11. Is the facility complying with requirements applicable to their transfer operations? 63.8025

- Is the facility complying with each emission limit and work practice standard in Table 5 that is applicable to their transfer operations? Yes No NA
 - Does the facility meet all applicable general requirements specified in 63.8000(b)? Yes No NA
- For each control device used to comply with Table 5 to this subpart, is the facility complying with Subpart SS of this Part 63, unless excepted [see 63.8000(d)]? Yes No NA
- If the facility has Group 1 transfer operations, then does all transfer racks used for bulk loading coatings meet the requirements for high throughput transfer racks in subpart SS of this part? Yes No NA

12. Is the facility complying with requirements applicable to their transfer operations? 63.8030

- Is the facility complying with the requirements specified in Table 6 that apply to their heat exchange systems, as applicable? Yes No NA

V. Alternative Means of Compliance

13. Did the facility choose to comply with emissions averaging for stationary process vessels at existing sources? 63.8050

- As an alternative to complying with the requirements in Table 1 for each individual stationary process vessel, did the facility elect to comply with emissions averaging for stationary process vessels greater than or equal to 250 gallons (gal) at an existing affected source? Yes No NA
- If yes, did the facility comply with the following:
- Get permission from the State Permitting Authority who might prohibit averaging of HAP emissions and require compliance with the emission limits and work practice standards in Table 1? Yes No NA
 - Equip all stationary process vessels in an emissions averaging group with a tightly-fitting vented cover. Yes No NA
 - Demonstrate initial compliance with the emissions averaging alternative, by complying with the following:
 - Estimate uncontrolled emissions from each affected stationary process vessel in pounds per batch using the procedures specified in 63.1257(d)(2) and did not use Equation 13 in that section to calculate uncontrolled emissions from heating. Yes No NA
 - Identify the range of typical operating parameters and perform the calculation using the values that result in the highest emissions. Yes No NA
 - Document the operating parameters and resulting emissions calculations in the pre-compliance report. Yes No NA
 - Determine a HAP-specific saturation factor determined in accordance with Equations 1 through 3 of this section. Yes No NA
 - Estimate controlled emissions in pounds per batch for each vessel, unless excepted? Yes No NA
 - Determine actual emissions in pounds per batch for each vessel in accordance with applicable procedures. Yes No NA
 - Provide rationale in the pre-compliance report for why the sum of the actual emissions will be less than the sum of emissions from the vessels if they had been controlled in accordance with Table 1 to this subpart [Note: The approved actual emissions calculated according the requirements of this section are emission limits that must be incorporated into your operating permit]. Yes No NA
 - Maintain a monthly log of the number of batches produced that can be correlated with the emissions estimates per batch developed. Yes No NA

- Sum the actual emissions for all of the process vessels in the emissions averaging group every three months, with the first 3-month period beginning on the compliance date, and compare the resulting total with the total emissions calculated for the vessels. Compliance is demonstrated if the sum of the actual emissions is less than the total calculated/estimated emissions.
 Yes No NA
- For control devices, establish operating limits and monitor (see 63.8000).
 Yes No NA
- Comply with recordkeeping requirements (see 63.8070, 63.8075, and 63.8080).
 Yes No NA

14. Is the facility complying with a weight percent HAP limit in coating products? 63.8055

- In lieu of complying with the requirements in Table 1 for each individual stationary process vessel at an existing source, did the facility elect to comply with a 5 weight percent HAP limit for process vessels at an affected source that are used to manufacture coatings with a HAP content of less than 0.05 kg per kg product?
 Yes No NA
- Did the facility comply with the above alternative only during the production of coatings that contain less than 5 weight percent HAP as determined using **any** of the procedures specified below:
 - Method 311 (40 CFR Part 63, Appendix A) Yes No NA
 - Method 24 (40 CFR Part 60, Appendix A). Note: the facility may use Method 24 to determine the mass fraction of volatile matter and use that value as a substitute for the mass fraction of HAP.
 Yes No NA
 - An alternative test method for determining mass fraction of HAP if prior approval by the Administrator obtained. Note: the facility must follow the procedure in general provisions [63.7(f)] to submit an alternative test method for approval. Yes No NA
 - Reliance on formulation data from raw material suppliers if it represents each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens, as specified in 29 CFR 1910.1200(d)(4), and at 1.0 percent by mass or more for other compounds. If the HAP weight percent estimated based on formulation data conflicts with the results of a test conducted according to procedures in this section, then there is a rebuttal presumption that the test results are accurate unless, after consultation, the facility demonstrates to the satisfaction of the permitting authority that the test results are not accurate and that the formulation data are more appropriate.
 Yes No NA

VI. Notifications, Reports and Records

15. Did the facility submit the required notifications in a timely manner? 63.8070

- Has the facility submitted all of the notifications in the general provisions (see Table 10) that apply by the dates specified? [Note: The notifications are described more fully in 40 CFR Part 63, Subpart A.]
 Yes No NA
- If the facility had an existing affected source on December 11, 2003, did they submit an initial notification not later than 120 calendar days after December 11, 2003?
 Yes No NA

- If the facility started up a new affected source on or after December 11, 2003, did they submit an initial notification not later than 120 calendar days after they become subject to this subpart?
 Yes No NA
- If the facility was required to conduct a performance test, did they submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test was scheduled to begin?
 Yes No NA
- For any performance test required as part of the initial compliance procedures for process vessels in Table 1, did the facility also submit the required test plan required [63.7(c)] and the emission profile with the notification of the performance test?
 Yes No NA

16. Did the facility submit the proper reports by the due date? 63.8075

- Did the facility submit each applicable report as described in Table 9 that applies to them?
 Yes No NA
 - Were compliance reports submitted semiannually?
 Yes No NA
 - Was the first report submitted not later than 240 days after the applicable compliance date and did it cover the 6-month period beginning on the compliance date?
 Yes No NA
 - Was each subsequent compliance report cover the 6-month period following the preceding period?
 Yes No NA
 - For affected sources subject to Title V permitting (40 CFR Part 70 or 71), did the facility elect to submit the semiannual reports according to the Title V rules, provided the permitting authority established dates for submitting them, in lieu of the Table 9 dates?
 Yes No NA
- If the facility submitted applicable reports on a schedule different from that described in Table 9, did they seek and obtain approval from the Administrator?
 Yes No NA
- Did the facility submit a pre-compliance report to the Administrator to request approval of any of the following:
 - Requests for approval to set operating limits for parameters other than those specified in this section, including parameter for enhanced biological treatment units?
 Yes No NA
 - Information providing descriptions of daily or per batch demonstrations to verify that applicable control devices are operating as designed?
 Yes No NA
 - Information providing a description of the test conditions, data, calculations and other information used to establish operating limits per 63.8050(c)(4)?
 Yes No NA
 - If complying with emissions averaging, information regarding the data and results of emission calculations, and rationale for why the sum of actual emissions will be less than the sum of emissions if the process vessels were controlled in accordance with Table 1 limits?
 Yes No NA
- If yes, were the requests approved by the Administrator?
 Yes No NA
- If not approved, did the facility comply with the emissions limitations and work practice standards in this subpart by the established compliance date?
 Yes No NA

- Did the facility submit the notification of compliance status report? Yes No NA
- Was the notification of compliance status report submitted no later than 150 days after the applicable compliance date? Yes No NA
- Did the notification of compliance status report include the following information:
 - Results of any applicability determinations? Yes No NA
 - Results of performance tests, engineering analyses, design evaluations, flare compliance assessments, inspections, repairs and calculation used to demonstrate initial compliance?
 - Yes No NA
 - Did the performance test results that were submitted include descriptions of sampling and analysis procedure and quality assurance procedures? Yes No NA
 - Descriptions of monitoring devices, monitoring frequencies and the operating limits established during the initial compliance demonstrations, including data and calculations to support the levels that the facility established? Yes No NA
 - Identification of parts of the affected source that are subject to overlapping requirements and the authority under which the facility will comply? Yes No NA
 - Identification of the storage tanks for which the facility is complying with the vapor balancing alternative? Yes No NA
 - For Transfer Group 1 wastewater streams going to an offsite facility for treatment, did the information submitted include the name and location of the transferee and a description of the Group 1 wastewater stream that was sent to the treatment facility? Yes No NA
 - If the offsite facility provides enhanced biological treatment, was the certification information (certifications that the offsite facility provides enhanced biological treatment) also included? Yes No NA
- Did the compliance report contain the required information:
 - Company name and address. Yes No NA
 - Statement by a responsible official certifying the accuracy of the report content and including the official's name, title and signature. Yes No NA
 - Date of report and beginning and ending dates of the reporting period. Yes No NA
 - Applicable records and information for periodic reports. Yes No NA
 - For each SSM (startup, shutdown and malfunction) during which excess emissions occurred, are there records that SSM Plan procedures were followed, or documentation of actions taken that were not consistent with the SSM Plan and a description of each malfunction. Yes No NA

- If no deviations, a statement that there were not deviations from the emission limits, operating limits, or work practice standard during the reporting period. Yes No NA
- Information on any deviations from emission limit, operating limit and work practice standard that occurred at an affected source where a continuous monitoring system (CMS) is not used for compliance:
 - Total operating time of each affected source during the reporting period. Yes No NA
 - Information on the number, duration and cause of deviations and the corrective action. Yes No NA
 - Operating logs for the days during which the deviation occurred [note: operating logs are not required for deviations of the work practice standards for equipment leaks]. Yes No NA
 - If using a CMS for compliance, the date and time each CMS was inoperative, excluding zero and high-level checks. Yes No NA
 - If using a CMS for compliance, include in the report:
 - The date, time and duration that each CEMS was out-of-control. Yes No NA
 - The date and time that each deviation started and stopped and whether each deviation occurred during a period of startup, shutdown or malfunction during another period. Yes No NA
 - A breakdown of the total duration of the deviations during the reporting period into shoes that are due to startup, shutdown, control equipment problems, process problems, and other known or unknown causes. Yes No NA
 - 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
 - An identification of each HAP that is known to be in the emission stream or wastewater stream, as applicable. Yes No NA
 - A description of the product being produced. Yes No NA
 - Identification of the CMS. Yes No NA
 - The date of the latest CMS certification or audit. Yes No NA
 - The operating day or operating block average values of monitored parameters for each day during which the deviation occurred. Yes No NA
 - If a CEMS is used and there were not periods during which it was out-of-control, a statement to that fact. Yes No NA
- A notification of process change to describe applicable change of information submitted in either the notification of compliance status report or in the compliance report. Yes No NA

- If submitted, was the report submitted 60 days before the scheduled implementation date of any of the following changes:
 - Any change to the information contained in either the pre-compliance report or any previously reported change to the pre-compliance report
 Yes No NA
 - A change in the status of a control device from small to large.
 Yes No NA
 - A change in compliance status.
 Yes No NA

17. Does the facility have the proper records? 63.8080

- Did the facility keep the following records, as applicable:
- Records required by the general provisions (40 CFR Part 63, Subpart A) and referenced Subparts SS, TT, UU and WW of Part 63?
 Yes No NA
 - For compliance with emissions averaging requirements, records of the monthly number of batches for each process vessel, the quarterly actual emissions for each process vessel, and the quarterly estimated emissions for each process vessel if it had been controlled as specified in Table 1, and comparison of the sums of the quarterly actual and estimated emissions?
 Yes No NA
 - A record of each time a safety device is opened to avoid unsafe conditions?
 Yes No NA
 - Records of the results of each CPMS calibration check and the maintenance performed?
 Yes No NA
 - For each CEMS, records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period?
 Yes No NA
 - For equipment leaks only, SSMP requirements for control devices (optional for other equipment).
 Yes No NA
 - A log of operation or daily schedule indicating the time when the facility changes from one operating limit to another, if the facility established separate operating limits [see 63.8005(e)]
 Yes No NA

VII. Other Requirements and Information

- 18. Does the facility have to comply with other options if part of their facility is subject to both this subpart and another subpart? 63.8090**

- Does the facility have a control device that is also subject to monitoring, recordkeeping and reporting requirements under 40 CFR Part 264/265, Subpart AA, BB or CC (RCRA Air Emissions Standard for Hazardous Waste Facilities)? Yes No NA
 - If yes, did the facility elect to comply with the monitoring, recordkeeping and reporting requirements under 40 CFR Part 264/265, Subpart AA, BB or CC? Yes No NA
 - If yes, did the facility report the information required for the compliance report in 63.8075(e), and identify the notification of compliance status report required by the reporting authority under which they comply? Yes No NA
- Does the facility have a storage tank that must also comply with 40 CFR Part 60, Subpart Kb (Standards for VOC Liquid Storage Vessels)? Yes No NA
 - Is the storage tank controlled with a floating roof and also in compliance with the applicable provisions of 40 CFR Part 60, Subpart Kb (If yes, the source is in compliance with this subpart)? Yes No NA
- Does the facility have affected sources that must also comply with 40 CFR Part 63, Subpart FFFF (Miscellaneous Organic Chemical Manufacturing)? Yes No NA
 - If yes, has all the following conditions been met (a yes to all means that the facility is in compliance with this subpart HHHH):
 - Equipment used for both miscellaneous coating manufacturing operations and as a part of miscellaneous organic chemical manufacturing process unit, an MCPU (see 63.2435), must be part of a process unit group developed in accordance with the provisions in 63.2535(I)? Yes No NA
 - Miscellaneous coating manufacturing operations that are not part of a process unit group, which consists of all coating manufacturing equipment that is also part of an MCPU, are in compliance with this subpart HHHHH? Yes No NA
 - The primary product for a process unit group that includes miscellaneous coating manufacturing equipment is organic chemicals [see 63.2435(b)(1)]? Yes No NA
 - The process unit group was in compliance with the requirements in 40 CFR Part 63, Subpart FFFF no later than the applicable compliance dates? Yes No NA
 - The notification of compliance status report is included in the required records? Yes No NA

19. Does the facility know which parts of the General Provisions apply to them? 63.8095

- Has the facility referred to Table 10 to determine which parts of the General Provisions in 63.1 through 63.15 apply to them? Yes No NA

VIII. Definitions

The following definitions are for terms used in this Subpart HHHHH [63.8105] and are also defined in the Clean Air Act (CAA) in 40 CFR 63.2 and in the general provisions of this part.

Bulk loading - the loading, into a tank truck or rail car, of liquid coating products that contain one or more of the organic HAP from a loading rack.

Coating - a material such as paint, ink, or adhesive that is intended to be applied to a substrate and consists of a mixture of resins, pigments, solvents, and/or other additives, where the material is produced by a manufacturing operation where materials are blended, mixed, diluted, or otherwise formulated. This definition does not include materials made in processes where a formulation component is synthesized by chemical reaction or separation activity and then transferred to another vessel where it is formulated to produce a material used as a coating, where the synthesized or separated component is not stored prior to formulation. Typically, coatings include products described by the following North American Industry Classification System (NAICS) codes: 325510 - Paint and Coating Manufacturing, 325520 - Adhesive and Sealant Manufacturing, and 325910 - Ink Manufacturing.

Construction - the onsite fabrication, erection, or installation of an affected source. Addition of new equipment to an affected source does not constitute construction, but it may constitute reconstruction of the affected source.

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

- Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard;
- Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- Fails to meet any emission limit, operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Enhanced biological treatment system means an aerated, thoroughly mixed treatment unit(s) that contains biomass suspended in water followed by a clarifier that removes biomass from the treated water and recycles recovered biomass to the aeration unit.

Excess emissions - emissions greater than those allowed by the emission limit.

Group 1a storage tank - a storage tank at an existing source with a capacity greater than or equal to 20,000 gal storing material that has a maximum true vapor pressure of total organic HAP greater than or equal to 1.9 pounds per square inch, absolute (psia). Group 1a storage tank also means a storage tank at a new source with either a capacity greater than or equal to 25,000 gal storing material that has a maximum true vapor pressure of total HAP greater than or equal to 0.1 psia or a capacity greater than or equal to 20,000 gal and less than 25,000 gal storing material that has a maximum true vapor pressure of total HAP greater than or equal to 1.5 psia.

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

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

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

Group 2 transfer operations - bulk loading of coating products that does not meet the definition of Group 1 transfer operations, and all loading of coating products from a loading rack to other types of containers such as cans, drums, and totes.

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

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

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

Hydrogen halide and halogen HAP - hydrogen chloride, chlorine, and hydrogen fluoride.

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

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

Maximum true vapor pressure - means the equilibrium partial pressure exerted by the total organic HAP in the stored or transferred liquid at the temperature equal to the highest calendar-month average of the liquid storage or transfer temperature for liquids stored or transferred above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for liquids stored or transferred at the ambient temperature, as determined:

- In accordance with methods described in American Petroleum Institute Publication 2517, Evaporative Loss From External Floating-Roof Tanks (incorporated by reference as specified in 63.14 of subpart A of this part 63); or
- As obtained from standard reference texts; or
- As determined by the American Society for Testing and Materials Method D2879–83 (incorporated by reference as specified in 63.14 of subpart A of this part); or
- Any other method approved by the Administrator.

Partially soluble HAP – a HAP listed in Table 7 of this subpart.

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

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

Process vessel vent - a vent from a process vessel or vents from multiple process vessels that are manifolded together into a common header, through which a HAP-containing gas stream is, or has the potential to be, released to the atmosphere. Emission streams that are undiluted and uncontrolled containing less than 50 ppmv HAP, are not considered process vessel vents. Flexible elephant trunk systems when used with closed vent systems and drawing ambient air (i.e., the system is not ducted, piped, or otherwise connected to the unit operations) away from operators when vessels are opened are not process vessel vents. Process vessel vents do not include vents on storage tanks, wastewater emission sources, or pieces of equipment subject to the requirements in Table 3 of this subpart. A gas stream going to a fuel gas system is not a process vessel vent. A gas stream routed to a process for a process purpose is not a process vessel vent.

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

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

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

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

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

Soluble HAP - the HAP listed in Table 8 of this subpart.

Startup - the setting in operation of a new affected source. For new equipment added to an affected source, including equipment required or used to comply with this subpart, startup means the first time the equipment is put into operation. Startup includes the setting in operation of equipment any time the steps taken differ from routine procedures for putting the equipment into operation.

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

- Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;

- Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere;
- Vessels storing organic liquids that contain HAP only as impurities;
- Wastewater storage tanks; and
- Process vessels.

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

Wastewater storage tank - a stationary structure that is designed to contain an accumulation of wastewater and is constructed primarily of non-earthen materials (*e.g.*, wood, concrete, steel, plastic) which provide structural support.

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

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

IX. Timeline of Compliance Events for Subpart HHHHH (See Note 1)

Event	Timeline
Effective Date	December 11, 2003
Initial Notification submittal	April 9, 2004
Submit notification of planned performance test	At least 60 days before the test. Test to demonstrate initial compliance must be conducted before May 10, 2007
Pre-compliance report submittal	No later than June 11, 2006
Compliance Date	December 11, 2006 (See Note 2)
Notification of compliance status report submittal	No later than May 10, 2007
First Semiannual reporting period	Ends June 11, 2007
First compliance report submittal	No later than August 8, 2007 Subsequent reports are due 6 months after the preceding report

Notes:

1. Dates shown are for existing sources. For new sources, the intervals between events are the same, but the compliance date is the date of startup. Additionally, the initial notification doesn't apply, but a request of approval of construction or reconstruction must be submitted.
2. If coating manufacturing operations are included in a process unit group (PUG) under Subpart FFFF, the compliance date is May 10, 2008.

X. Tables 1 – 10 for Subpart HHHHH of Part 63

Table 1 to Subpart HHHHH of Part 63 – Emission Limits and Work Practice Standards for Process Vessels

As required in 63.8005, the facility must meet each emission limit and work practice standard that applies to their process vessels.

For each...	The facility must...	And must...
Portable process vessel at an existing source	Equip the vessel with a cover or lid that must be in place at all times when the vessel contains a HAP, except for material additions and sampling	N/A
Stationary process vessel at an existing source	Equip the vessel with a cover or lid that must be in place at all times when the vessel contains a HAP, except for material additions and sampling; or Equip the vessel with a tightly fitting vented cover or lid that must be closed at all times when the vessel contains HAP, except for material additions and sampling	Considering both capture and any combination of control (except a flare), reduce emissions of organic HAP with a vapor existing pressure ≥ 0.6 kPa by ≥ 75 % by weight, and reduce emissions of organic HAP with a vapor pressure < 0.6 kPa by ≥ 60 % by weight.
		Reduce emissions of organic HAP with a vapor pressure ≥ 0.6 kPa by ≥ 75 percent by weight, and reduce emissions of organic HAP with a vapor pressure < 0.6 kPa by ≥ 60 percent by weight, by venting emissions through a closed-vent system to any combination of control devices (except a flare); or
		Reduce emissions of total organic HAP by venting emissions from a non-halogenated vent stream through a closed-vent system to a flare; or
		Reduce emissions of total organic HAP by venting emissions through a closed-vent system to a condenser that reduces the outlet gas temperature to: <ul style="list-style-type: none"> • < 10 °C if the process vessel contains HAP with a partial pressure < 0.6 kPa, or • < 2 °C if the process vessel contains HAP with a partial pressure ≥ 0.6 kPa and < 17.2 kPa, or • < -5 °C if the process vessel contains HAP with a partial pressure ≥ 17.2 kPa.
Portable and stationary process vessel at a new source	Equip the vessel with a tightly fitting vented cover or lid that must be closed at all times when the vessel contains HAP, except for material additions and sampling	Reduce emissions of organic HAP with a vapor pressure ≥ 0.6 kPa by ≥ 75 percent by weight, and reduce emissions of organic HAP with a vapor pressure < 0.6 kPa by ≥ 60 percent by weight, by venting emissions through a closed-vent system to any combination of control devices (except a flare); or
		Reduce emissions of total organic HAP by venting emissions from a non-halogenated vent stream through a closed-vent system to a flare; or
		Reduce emissions of total organic HAP by venting emissions through a closed-vent system to a condenser that reduces the outlet gas temperature to: <ul style="list-style-type: none"> • < 10 °C if the process vessel contains HAP with a partial pressure < 0.6 kPa, or • < 2 °C if the process vessel contains HAP with a partial pressure ≥ 0.6 kPa and < 17.2 kPa, or • < -5 °C if the process vessel contains HAP with a partial pressure ≥ 17.2 kPa.
Halogenated vent steam from a process vessel subject to the requirements of item 2 or 3 of this table for which you use a combustion control device to control organic HAP emissions	Use a halogen reduction device after the combustion control device; or	Reduce overall emissions of hydrogen halide and halogen HAP by ≥ 95 percent; or
		Reduce overall emissions of hydrogen halide and halogen HAP to ≤ 0.45 kilogram per hour (kg/hr).
	Use a halogen reduction device before the combustion control device	Reduce the halogen atom mass emission rate to ≤ 0.45 kg/hr.

Table 2 to Subpart HHHHH of part 63 – Emission Limits for Storage Tanks

As required in 63.8010, facilities with affected sources must meet each emission limit that applies to their storage tanks.

For each ...	The facility must...
Group 1a storage tank	Comply with the requirements of Subpart WW of this part, except as specified in 63.8010(b); or
	Reduce total organic HAP emissions from the storage tank by $\geq 90\%$ by weight by venting emissions through a closed vent system to any combination of control devices (excluding a flare); or
	Reduce total organic HAP emissions from the storage tank by venting emissions from a non-halogenated vent stream through a closed-vent system to a flare.
Group 1b storage tank	Comply with the requirements of Subpart WW of this part, except as specified in 63.8010(b); or
	Reduce total organic HAP emissions from the storage tank by $\geq 80\%$ by weight by venting emissions through a closed-vent system to any combination of control devices (excluding a flare); or
	Reduce total organic HAP emissions from the storage tank by venting emissions from a non-halogenated vent stream through a closed-vent system to a flare.

TABLE 3 TO SUBPART HHHHH OF PART 63 - Requirements for Equipment Leaks

As required 63.8015, the facility must meet each requirement in the following table that applies to their equipment leaks.

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

TABLE 4 TO SUBPART HHHHH OF PART 63 – Emission Limits and Work Practice Standards for Wastewater Streams

As required in 63.8020, the facility must meet each emission limit and work practice standard in the following table that applies to their wastewater streams.

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

Table 5 to Subpart HHHHH of Part 63 – Emission Limits and Work Practice Standards for Transfer Operations

As required in 63.8025, the facility must meet each emission limit and work practice standard in the following table that applies to their transfer operations

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

TABLE 6 TO SUBPART HHHHH OF PART 63 – Requirements for Heat Exchange Systems

As required in 63.8030, the facility must meet each requirement in the following table that applies to tier heat exchange systems.

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

TABLE 7 TO SUBPART HHHHH OF PART 63 – Partially Soluble Hazardous Air Pollutants

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

Chemical Name....	CAS No.
1. 1,1,1-Trichloroethane (methyl chloroform)	71556
2. 1,1,1,2-Tetrachloroethane	79345
3. 1,1,2-Trichloroethane	79005
4. 1,1-Dichloroethylene (vinylidene chloride)	75354
5. 1,2-Dibromoethane	106934
6. 1,2-Dichloroethane (ethylene dichloride)	107062
7. 1,2-Dichloropropane	78875
8. 1,3-Dichloropropene	542756
9. 2,4,5-Trichlorophenol	95954
10. 2-Butanone (MEK)	78933
11. 1,4-Dichlorobenzene	106467
12. 2-Nitropropane	79469
13. 4-Methyl-2-pentanone (MIBK)	108101
14. Acetaldehyde	75070
15. Acrolein	107028
16. Acrylonitrile	107131
17. Allyl chloride	107051
18. Benzene	71432
19. Benzyl chloride	100447
20. Biphenyl	92524
21. Bromoform (tribromomethane)	75252
22. Bromomethane	74839
23. Butadiene	106990
24. Carbon disulfide	75150
25. Chlorobenzene	108907
26. Chloroethane (ethyl chloride)	75003
27. Chloroform	67663
28. Chloromethane	74873
29. Chloroprene	126998
30. Cumene	98828
31. Dichloroethyl ether	111444
32. Dinitrophenol	51285
33. Epichlorohydrin	106898
34. Ethyl acrylate	140885
35. Ethylbenzene	100414
36. Ethylene oxide	75218
37. Ethylidene dichloride	75343
38. Hexachlorobenzene	118741
39. Hexachlorobutadiene	87683
40. Hexachloroethane	67721
41. Methyl methacrylate	80626
42. Methyl-t-butyl ether	1634044
43. Methylene chloride	75092
44. N-hexane	110543
45. N,N-dimethylaniline	121697
46. Naphthalene	91203
47. Phosgene	75445
48. Propionaldehyde	123386
49. Propylene oxide	75569
50. Styrene	100425
51. Tetrachloroethylene (perchloroethylene)	127184
52. Tetrachloromethane (carbon tetrachloride)	56235
53. Toluene	108883
54. Trichlorobenzene (1,2,4-)	120821
55. Trichloroethylene	79016
56. Trimethylpentane	540841
57. Vinyl acetate	108054
58. Vinyl chloride	75014
59. Xylene (m)	108383
60. Xylene (o)	95476
61. Xylene (p)	106423

TABLE 8 TO SUBPART HHHHH of Part 63 – Soluble Hazardous Air Pollutants

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

Chemical Name....	CAS No.
1. Acetonitrile	75058
2. Acetophenone	98862
3. Diethyl sulfate	64675
4. Dimethyl hydrazine (1,1)	57147
5. Dimethyl sulfate	77781
6. Dinitrotoluene (2,4)	121142
7. Dioxane (1,4)	123911
8. Ethylene glycol dimethyl ether	110714
9. Ethylene glycol monobutyl ether acetate	112072
10. Ethylene glycol monomethyl ether acetate	110496
11. Isophorone	78591
12. Methanol	67561
13. Nitrobenzene	98953
14. Toluidine (o-)	95534
15. Triethylamine	121448

TABLE 9 TO SUBPART HHHHH OF PART 63 – Requirements for Reports

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

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

Table 10 to Subpart HHHHH of Part 63 – Applicability of General Provisions (Subpart A)

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

Citation	Subject	Explanation
63.1	Applicability	Yes
63.2	Definitions	Yes
63.3	Units and Abbreviations	Yes
63.4	Prohibited Activities	Yes
63.5	Construction/Reconstruction	Yes
63.6 (a)	Applicability	Yes
63.6 (b) (1) – (4)	Compliance dates for new and reconstructed sources	Yes
63.6 (b) (6)	Reserved	
63.6 (b) (7)	Compliance dates for new operations or equipment that cause an area source to become a major source	Yes
63.6 (c) (1) – (2)	Compliance dates for existing sources	Yes
63.6 (c) (3) – (4)	Reserved	
63.6 (c) (5)	Compliance dates for existing area sources that become major	Yes
63.6 (d)	Reserved	No
63.6 (e) (1) – (2)	Operation and maintenance requirements	Yes
63.6 (e)(3)(i), (ii), and (v) – (viii)	SSMP	Yes, except information regarding Group 2 emission points and equipment leaks is not required in the SSMP, as specified in 63.8080(f)
63.6 (e) (3)(iii) and (iv)	Recordkeeping and Reporting during Startup, shutdown and malfunction plan (SSM)	No. 63.998(d)(3) and 63.998(c)(1)(ii)(D) through (G) specify the recordkeeping requirement for SSM events, and 63.8075(e)(5) specifies reporting requirements.
63.6(e)(3)(ix)	Title V permit	Yes
63.6 (f) (1)	Compliance except during periods of startup, shutdown and malfunction (SSM)	Yes
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 (VE) standards	Only for flares for which Method 22 observations are required as part of a flare compliance assessment.
63.6 (i) (1) – (14)	Compliance extensions	Yes
63.6 (j)	Presidential compliance exemption	Yes
63.7 (a) (1)-(2)	Performance Test Dates	Yes, except substitute 150 days for 180 days.
63.7 (a) (3)	CAA Section 114 authority	Yes, and this paragraph also applies to flare compliance assessments as specified under 63.997(b)(2)
63.7 (b) (1)	Notification of performance test	Yes
63.7 (b) (2)	Notification of rescheduling	Yes
63.7 (c)	Quality assurance/Test Plan	Yes, except that the test plan must be submitted with the notification of performance test if the control device controls process vessels.
63.7 (d)	Testing facilities	Yes
63.7 (e)(1)	Conditions for conducting performance tests	Yes, except that performance tests for process vessels must be conducted under worst-case conditions as specified in 63.8005.
63.7(e)(2)	Conditions for conducting performance tests	Yes
63.7(e)(3)	Test Run Duration	Yes
63.7 (f)	Alternative test method	Yes
63.7 (g)	Performance test data analysis	Yes
63.7 (h)	Waiver of tests	Yes
63.8 (a) (1)	Applicability of monitoring requirements	Yes
63.8 (a) (2)	Performance Specifications	Yes
63.8 (a) (3)	Reserved	
63.8 (a) (4)	Monitoring with flares	Yes
63.8 (b) (1)	Monitoring	Yes
63.8 (b) (2) – (3)	Multiple effluents and multiple monitoring systems	Yes
63.8 (c) (1)	Monitoring system operation and maintenance	Yes
63.8 (c) (1)(i)	Maintain and operate CMS	Yes
63.8 (c) (1)(ii)	Routine repairs	Yes
63.8 (c) (1)(iii)	SSMP for CMS	Yes

Citation	Subject	Explanation
63.8 (c) (2) – (3)	Monitoring system installation	Yes
63.8 (c) (4)	Requirements	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63. This subpart does not contain requirements for continuous opacity monitoring systems (COMS).
63.8 (c) (4)(i)	CMS Requirements	No. This subpart does not require COMS
63.8 (c) (4)(ii)	CMS Requirements	Yes
63.8 (c) (5)	Continuous Opacity Monitoring System (COMS) minimum procedures	No. This subpart does not contain opacity or VE limits.
63.8 (c) (6)	CMS Requirements	Only for CEMS; requirements for CPMS are specified in referenced Subpart SS of 40 CFR part 63.
63.8 (c) (7) – (8)	CMS Requirements	Only for CEMS. Requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63.
63.8 (d)	CMS quality control	Only for CEMS. Requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63.
63.8 (e)	CMS Performance evaluation	Section 63.8(e)(6)(ii) does not apply because this subpart does not require COMS. Other sections apply only for CEMS; requirements for CPMS are specified in referenced subpart SS of 40 CFR Part 63.
63.8 (f) (1) – (5)	Alternative monitoring method	Yes, except you may also request approval using the pre-compliance report
63.8 (f) (6)	Alternative to relative accuracy test	Only for CEMS.
63.8 (g) (1) – (4)	Data reduction	Only when using CEMS, except 63.8(g)(2) does not apply because data reduction requirements for CEMS are specified in 63.8000(d)(4)(iv). The requirements for COMS do not apply because this subpart has no opacity or VE limits
63.8(g)(5)	Data reduction	No. Requirements for CEMS are specified in 63.8000(d)(4). Requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63.
63.9 (a)	Notification requirements	Yes
63.9 (b) (1)-(5)	Initial notifications	Yes
63.9 (c)	Request for compliance extension	Yes
63.9 (d)	Notification of special compliance requirements for new source	Yes
63.9 (e)	Notification of performance test	Yes
63.9 (f)	Notification of opacity and visible emissions test	No. This subpart does not contain opacity or visible emission limits
63.9 (g)	Additional notification requirements when CMS	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63.
63.9 (h) (1) – (6)	Notification of compliance status	Yes, except this subpart has no opacity or VE limits, and 63.9(h)(2) does not apply because 63.8075(d) specifies the required contents and due date of the notification of compliance status report.
63.9 (i)	Adjustment of submittal deadlines	Yes
63.9 (j)	Change in previous information	No. 63.8075(e)(8) specifies reporting requirements for process changes.
63.10 (a)	Record keeping and reporting	Yes
63.10 (b) (1)	Recordkeeping/Reporting	Yes
63.10 (b) (2) (i) – (iv)	Records related to (SSM) startup, shutdown and malfunction	No. 63.998(d)(3) and 63.998(c)(1)(ii)(D) through (G) specify recordkeeping requirements for periods of SSM.
63.10 (b) (2) (iii)	Records related to maintenance of air pollution control equipment	Yes
63.10 (b) (2) (vii), (x) and (xi)	CMS Records	Only for CEMS; requirements for CPMS are specified in reference d subpart SS of 40 CFR part 63.

Citation	Subject	Explanation
63.10 (b) (2) (vii)-(ix)	Records	Yes
63.10 (b) (2) (xii)	Records	Yes
63.10 (b) (2) (xiii)	Records	Yes
63.10 (b) (2) (xiv)	Records	Yes
63.10 (b) (3)	Records	Yes
63.10 (c) (1)-(6), (9)-(15)	CMS records	Only for CEMS; requirements for CPMS are specified in referenced subpart SS of 40 CFR part 63.
63.10 (c) (7)-(8)	Records	No. Recordkeeping requirements are specified in 63.8080
63.10 (d) (1)	General reporting requirements	Yes
63.10 (d) (2)	Report of performance test results	Yes
63.10 (d) (3)	Reporting opacity or visible emission observations	No. This subpart does not contain opacity or VE limits.
63.10 (d) (4)	Progress reports	Yes
63.10 (d) (5)(i)	Startup, shutdown and malfunction (SSM) reports	No, 63.8075(e)(5) and (6) specify the SSM reporting requirements.
63.10 (d) (5)(ii)	Immediate SSM reports	No
63.10 (e) (1) – (2)	Additional CMS reports	Only for CEMS, but 63.10(e)(2)(ii) does not apply because this subpart does not require COMS.
63.10 (e) (3)	Reports	No. Reporting requirements are specified in 63.8075.
63.10 (e) (3)(i)-(iii)	Reports	No. Reporting requirements are specified in 63.8075.
63.10 (e) (3)(iv)-(v)	Excess Emissions Reports	No. Reporting requirements are specified in 63.8075.
63.10 (e) (3)(vi)-(viii)	Excess Emission Report and Summary Report	No. Reporting requirements are specified in 63.8075.
63.10 (e) (4)	Reporting COMS data	No. This Subpart does not contain opacity or VE standards
63.10 (f)	Waiver for recordkeeping/reporting	Yes
63.11	Control and work practice requirements	Yes
63.12	Delegations	Yes
63.13	Addresses	Yes
63.14	Incorporation by reference	Yes
63.15	Availability of information	Yes

XI. Equations for Subpart HHHHH of Part 63

- These equations are used to determine saturation factors for all condensable compounds, not just HAPs

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

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

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

Where:

- S_i =saturation factor for individual condensable compounds in the emission stream
- P_i =partial pressure of individual condensable compounds in the emission stream calculated using Raoult's Law or other appropriate methods
- P_T =pressure of the vessel vapor space
- A =surface area of liquid
- V =purge flow rate as used in Equation 12 of 40 CFR part 63, subpart GGG
- V_i^{sat} =volumetric flowrate of condensable compounds in the emission stream
- K_i =mass transfer coefficient of individual condensable compounds in the emission stream
- K_o =mass transfer coefficient of a reference compound (e.g., 0.83 cm/s for water)
- M_o =molecular weight of reference compound (e.g., 18.02 for water)
- M_i =molecular weight of individual condensable compounds in the emission stream
- n =number of condensable compounds in the emission stream

XII. 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 is 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)].

4. 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.

5. 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.

6. 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.

7. 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.