

## Appendix \_\_. Requirements for a Generic 40 CFR 63.7540 Compliance Plan

**Include only if Emission Limits; a customer could choose to further refine for their category or source; if customized, then verify numbering upon finalization**

1. The permittee must demonstrate continuous compliance with each emission limit in Table 2 of 40 CFR Part 63, Subpart DDDDD, the work practice standards in Table 3 of 40 CFR Part 63, Subpart DDDDD, and the operating limits in Table 4 of 40 CFR Part 63, Subpart DDDDD that applies according to the methods specified in Table 8 of 40 CFR Part 63, Subpart DDDDD and paragraphs (a)(1) through (19) of 40 CFR 63.7540, as listed below. **(40 CFR 63.7540(a))**
  - a. Following the date on which the initial compliance demonstration is completed or is required to be completed under 40 CFR 63.7 and 40 CFR 63.7510, operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits listed in Table 4 of 40 CFR Part 63, Subpart DDDDD except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests. **(40 CFR 63.7540(a)(1))**
  - b. As specified in 40 CFR 63.7550(c), the permittee must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in either of the following: **(40 CFR 63.7540(a)(2))**
    - i. Lower emissions of HCl, mercury, and TSM than the applicable emission limit for each pollutant, if the permittee demonstrates compliance through fuel analysis. **(40 CFR 63.7540(a)(2)(i))**
    - ii. Lower fuel input of chlorine, mercury, and TSM than the maximum values calculated during the last performance test, if the permittee demonstrates compliance through performance testing. **(40 CFR 63.7540(a)(2)(ii))**
  - c. If the permittee demonstrates compliance with an applicable HCl emission limit through fuel analysis for a solid or liquid fuel and the permittee plans to burn a new type of solid or liquid fuel, the permittee must recalculate the HCl emission rate using Equation 12 of 40 CFR 63.7530 according to paragraphs (a)(3)(i) through (iii) of 40 CFR 63.7540, as listed below. The permittee is not required to conduct fuel analyses for the fuels described in 40 CFR 63.7510(a)(2)(i) through (iii). The permittee may exclude the fuels described in 40 CFR 63.7510(a)(2)(i) through (iii), when recalculating the HCl emission rate. **(40 CFR 63.7540(a)(3))**
    - i. The permittee must determine the chlorine concentration for any new fuel type in units of pounds per million Btu, based on supplier data or the permittee's fuel analysis, according to the provisions in the site-specific fuel analysis plan developed according to 40 CFR 63.7521(b). **(40 CFR 63.7540(a)(3)(i))**
    - ii. The permittee must determine the new mixture of fuels that will have the highest content of chlorine. **(40 CFR 63.7540(a)(3)(ii))**
    - iii. Recalculate the HCl emission rate from the boiler or process heater under these new conditions using Equation 12 of 40 CFR 63.7530. The recalculated HCl emission rate must be less than the applicable emission limit. **(40 CFR 63.7540(a)(3)(iii))**
  - d. If the permittee demonstrates compliance with an applicable HCl emission limit through performance testing and the permittee plans to burn a new type of fuel or a new mixture of fuels, the permittee must recalculate the maximum chlorine input using Equation 7 of 40 CFR 63.7530. If the results of recalculating the maximum chlorine input using Equation 7 of 40 CFR 63.7530 are greater than the maximum chlorine input level established during the previous performance test, then the permittee must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in 40 CFR 63.7520 to demonstrate that the HCl emissions do not exceed the emission limit. The permittee must also establish new operating limits based on this performance test according to the procedures in 40 CFR 63.7530(b). In recalculating the maximum chlorine input and establishing the new operating limits, the permittee is not required to conduct fuel analyses for and include the fuels described in 40 CFR 63.7510(a)(2)(i) through (iii). **(40 CFR 63.7540(a)(4))**

- e. If the permittee demonstrates compliance with an applicable mercury emission limit through fuel analysis, and the permittee plans to burn a new type of fuel, the permittee must recalculate the mercury emission rate using Equation 13 of 40 CFR 63.7530, according to the procedures specified in paragraphs (a)(5)(i) through (iii) of 40 CFR 63.7540, as listed below. The permittee is not required to conduct fuel analyses for the fuels described in 40 CFR 63.7510(a)(2)(i) through (iii). The permittee may exclude the fuels described in 40 CFR 63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate. **(40 CFR 63.7540(a)(5))**
  - i. The permittee must determine the mercury concentration for any new fuel type in units of pounds per million Btu, based on supplier data or the permittee's fuel analysis, according to the provisions in the site-specific fuel analysis plan developed according to 40 CFR 63.7521(b). **(40 CFR 63.7540(a)(5)(i))**
  - ii. The permittee must determine the new mixture of fuels that will have the highest content of mercury. **(40 CFR 63.7540(a)(5)(ii))**
  - iii. Recalculate the mercury emission rate from the boiler or process heater under these new conditions using Equation 13 of 40 CFR 63.7530. The recalculated mercury emission rate must be less than the applicable emission limit. **(40 CFR 63.7540(a)(5)(iii))**
- f. If the permittee demonstrates compliance with an applicable mercury emission limit through performance testing, and the permittee plans to burn a new type of fuel or a new mixture of fuels, the permittee must recalculate the maximum mercury input using Equation 8 of 40 CFR 63.7530. If the results of recalculating the maximum mercury input using Equation 8 of 40 CFR 63.7530 are higher than the maximum mercury input level established during the previous performance test, then the permittee must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in 40 CFR 63.7520 to demonstrate that the mercury emissions do not exceed the emission limit. The permittee must also establish new operating limits based on this performance test according to the procedures in 40 CFR 63.7530(b). The permittee is not required to conduct fuel analyses for the fuels described in 40 CFR 63.7510(a)(2)(i) through (iii). The permittee may exclude the fuels described in 40 CFR 63.7510(a)(2)(i) through (iii), when recalculating the mercury emission rate. **(40 CFR 63.7540(a)(6))**
- g. If the unit is controlled with a fabric filter, and the permittee demonstrates continuous compliance using a bag leak detection system, the permittee must initiate corrective action within 1 hour of a bag leak detection system alert and complete corrective actions as soon as practical, and operate and maintain the fabric filter system such that the periods which would cause an alert are no more than 5 percent of the operating time during a 6-month period. The permittee must also keep records of the date, time, and duration of each alert, the time corrective action was initiated and completed, and a brief description of the cause of the alert and the corrective action taken. The permittee must also record the percent of the operating time during each 6-month period that the conditions exist for an alert. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alert time is counted. If corrective action is required, each alert shall be counted as a minimum of 1 hour. If the permittee takes longer than 1 hour to initiate corrective action, the alert time shall be counted as the actual amount of time taken to initiate corrective action. **(40 CFR 63.7540(a)(7))**
- h. To demonstrate compliance with the applicable alternative CO CEMS emission limit listed in Table 2 of 40 CFR Part 63, Subpart DDDDD, the permittee must meet the requirements in paragraphs (a)(8)(i) through (iv) of 40 CFR 63.7540, as listed below. **(40 CFR 63.7540(a)(8))**
  - i. Continuously monitor CO according to 40 CFR 63.7525(a) and 40 CFR 63.7535. **(40 CFR 63.7540(a)(8)(i))**
  - ii. Maintain a CO emission level below or at the applicable alternative CO CEMS-based standard in **Table 2** of 40 CFR Part 63, Subpart DDDDD at all times the affected unit is operating. **(40 CFR 63.7540(a)(8)(ii))**
  - iii. Keep records of CO levels according to 40 CFR 63.7555(b). **(40 CFR 63.7540(a)(8)(iii))**
  - iv. The permittee must record and make available upon request results of CO CEMS performance audits, dates and duration of periods when the CO CEMS is out of control to completion of the corrective

actions necessary to return the CO CEMS to operation consistent with the site-specific monitoring plan. **(40 CFR 63.7540(a)(8)(iv))**

- i. The owner or operator of a boiler or process heater using a PM CPMS (Continuous Parametric Monitoring System) or a PM CEMS to meet requirements of 40 CFR Part 63, Subpart DDDDD shall install, certify, operate, and maintain the PM CPMS or PM CEMS in accordance with the site-specific monitoring plan as required in 40 CFR 63.7505(d). **(40 CFR 63.7540(a)(9))**
- j. **If the boiler** or process heater has a heat input capacity of 10 million Btu per hour or greater, the permittee must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of 40 CFR 63.7540, as listed below. This frequency does not apply to limited-use boilers and process heaters, as defined in 40 CFR 63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio. **(40 CFR 63.7540(a)(10))**
  - i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment. **(40 CFR 63.7540(a)(10)(i))**
  - ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. **(40 CFR 63.7540(a)(10)(ii))**
  - iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection. **(40 CFR 63.7540(a)(10)(iii))**
  - iv. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO<sub>x</sub> requirement to which the unit is subject. **(40 CFR 63.7540(a)(10)(iv))**
  - v. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. **(40 CFR 63.7540(a)(10)(v))**
  - vi. Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (a)(10)(vi)(A) through (C) of 40 CFR 63.7540, as listed below. **(40 CFR 63.7540(a)(10)(vi))**
    - (1). The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater. **(40 CFR 63.7540(a)(10)(vi)(A))**
    - (2). A description of any corrective actions taken as a part of the tune-up. **(40 CFR 63.7540(a)(10)(vi)(B))**
    - (3). The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. **(40 CFR 63.7540(a)(10)(vi)(C))**
- k. **If the boiler** or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of 40 CFR 63.7540), the permittee must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of 40 CFR 63.7540 to demonstrate continuous compliance. **(40 CFR 63.7540(a)(11))**
- l. **If the boiler** or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in 40 CFR 63.7575, the permittee must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs

(a)(10)(i) through (vi) of this section to demonstrate continuous compliance. The permittee may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but the permittee must inspect each burner at least once every 72 months. **(40 CFR 63.7540(a)(12))**

- m. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. **(40 CFR 63.7540(a)(13))**
- n. If the permittee is using a CEMS measuring mercury emissions to meet requirements of 40 CFR Part 63, Subpart DDDDD the permittee must install, certify, operate, and maintain the mercury CEMS as specified in paragraphs (a)(14)(i) and (ii) of 40 CFR 63.7540, as listed below. **(40 CFR 63.7540(a)(14))**
  - i. Operate the mercury CEMS in accordance with performance specification 12A of 40 CFR Part 60, Appendix B or operate a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR Part 60, Appendix B. The duration of the performance test must be the maximum of 30 unit operating days or 720 hours. For each day in which the unit operates, the permittee must obtain hourly mercury concentration data, and stack gas volumetric flow rate data. **(40 CFR 63.7540(a)(14)(i))**
  - ii. If the permittee is using a mercury CEMS, the permittee must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR Part 60, Appendix B, and quality assurance procedure 6 of 40 CFR Part 60, Appendix F. **(40 CFR 63.7540(a)(14)(ii))**
- o. If the permittee is using a CEMS to measure HCl emissions to meet requirements of 40 CFR Part 63, Subpart DDDDD, the permittee must install, certify, operate, and maintain the HCl CEMS as specified in paragraphs (a)(15)(i) and (ii) of 40 CFR 63.7540, as listed below. This option for an affected unit takes effect on the date a final performance specification for an HCl CEMS is published in the Federal Register or the date of approval of a site-specific monitoring plan. **(40 CFR 63.7540(a)(15))**
  - i. Operate the continuous emissions monitoring system in accordance with the applicable performance specification in 40 CFR Part 60, Appendix B. The duration of the performance test must be the maximum of 30 unit operating days or 720 hours. For each day in which the unit operates, the permittee must obtain hourly HCl concentration data, and stack gas volumetric flow rate data. **(40 CFR 63.7540(a)(15)(i))**
  - ii. If the permittee is using a HCl CEMS, the permittee must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the HCl mass emissions rate to the atmosphere according to the requirements of the applicable performance specification of 40 CFR Part 60, Appendix B, and the quality assurance procedures of 40 CFR Part 60, Appendix F. **(40 CFR 63.7540(a)(15)(ii))**
- p. If the permittee demonstrates compliance with an applicable TSM emission limit through performance testing, and the permittee plans to burn a new type of fuel or a new mixture of fuels, the permittee must recalculate the maximum TSM input using Equation 9 of 40 CFR 63.7530. If the results of recalculating the maximum TSM input using Equation 9 of 40 CFR 63.7530 are higher than the maximum total selected input level established during the previous performance test, then the permittee must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in 40 CFR 63.7520 to demonstrate that the TSM emissions do not exceed the emission limit. The permittee must also establish new operating limits based on this performance test according to the procedures in 40 CFR 63.7530(b). The permittee is not required to conduct fuel analyses for the fuels described in 40 CFR 63.7510(a)(2)(i) through (iii). The permittee may exclude the fuels described in 40 CFR 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate. **(40 CFR 63.7540(a)(16))**
- q. If the permittee demonstrates compliance with an applicable TSM emission limit through fuel analysis for solid or liquid fuels, and the permittee plans to burn a new type of fuel, the permittee must recalculate the TSM emission rate using Equation 14 of 40 CFR 63.7530, according to the procedures specified in paragraphs (a)(5)(i) through (iii) of 40 CFR 63.7540. The permittee is not required to conduct fuel analyses for the fuels described in 40 CFR 63.7510(a)(2)(i) through (iii). The permittee may exclude the fuels described in 40 CFR 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate. **(40 CFR 63.7540(a)(17))**

- i. The permittee must determine the TSM concentration for any new fuel type in units of pounds per million Btu, based on supplier data or the permittee's fuel analysis, according to the provisions in the site-specific fuel analysis plan developed according to 40 CFR 63.7521(b). **(40 CFR 63.7540(a)(17)(i))**
  - ii. The permittee must determine the new mixture of fuels that will have the highest content of TSM. **(40 CFR 63.7540(a)(17)(ii))**
  - iii. Recalculate the TSM emission rate from the boiler or process heater under these new conditions using Equation 14 of 40 CFR 63.7530. The recalculated TSM emission rate must be less than the applicable emission limit. **(40 CFR 63.7540(a)(17)(iii))**
- r. If the permittee demonstrates continuous PM emissions compliance with a PM CPMS the permittee will use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. The permittee will conduct the performance test using the test method criteria in Table 5 of 40 CFR Part 63, Subpart DDDDD. The permittee will use the PM CPMS to demonstrate continuous compliance with this operating limit. The permittee must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. **(40 CFR 63.7540(a)(18))**
- i. To determine continuous compliance, the permittee must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. The permittee must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new boiler or process heater operating hour. **(40 CFR 63.7540(a)(18)(i))**
  - ii. For any deviation of the 30-day rolling PM CPMS average value from the established operating parameter limit, the permittee must: **(40 CFR 63.7540(a)(18)(ii))**
    - (1). Within 48 hours of the deviation, visually inspect the air pollution control device (APCD). **(40 CFR 63.7540(a)(18)(ii)(A))**
    - (2). If inspection of the APCD identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value. **(40 CFR 63.7540(a)(18)(ii)(B))**
    - (3). Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the CPMS operating limit. The permittee is not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph. **(40 CFR 63.7540(a)(18)(ii)(C))**
  - iii. PM CPMS deviations from the operating limit leading to more than four required performance tests in a 12-month operating period constitute a separate violation of 40 CFR Part 63, Subpart DDDDD. **(40 CFR 63.7540(a)(18)(iii))**
- s. If the permittee chooses to comply with the PM filterable emissions limit by using PM CEMS the permittee must install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (a)(19)(i) through (vii) of 40 CFR 63.7540, as listed below. The compliance limit will be expressed as a 30-day rolling average of the numerical emissions limit value applicable for the unit in Table 2 of 40 CFR Part 63, Subpart DDDDD. **(40 CFR 63.7540(a)(19))**
- i. Install and certify the PM CEMS according to the procedures and requirements in Performance Specification 11—Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to Part 60 of 40 CFR, using test criteria outlined in Table 5 of 40 CFR Part 63, Subpart DDDDD. The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh). **(40 CFR 63.7540(a)(19)(i))**
  - ii. Operate and maintain the PM CEMS according to the procedures and requirements in Procedure 2—Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to Part 60 of 40 CFR. **(40 CFR 63.7540(a)(19)(ii))**
    - (1). The permittee must conduct the relative response audit (RRA) for the PM CEMS at least once annually. **(40 CFR 63.7540(a)(19)(ii)(A))**

- (2). The permittee must conduct the relative correlation audit (RCA) for the PM CEMS at least once every 3 years. **(40 CFR 63.7540(a)(19)(ii)(B))**
- iii. Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (i) of 40 CFR 63.7540\*. **(40 CFR 63.7540(a)(19)(iii))**
- iv. Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler or process heater operating hours. **(40 CFR 63.7540(a)(19)(iv))**
- v. The permittee must collect data using the PM CEMS at all times the unit is operating and at the intervals specified in paragraph (a) of 40 CFR 63.7540, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities. **(40 CFR 63.7540(a)(19)(v))**
- vi. The permittee must use all the data collected during all boiler or process heater operating hours in assessing the compliance with the operating limit except: **(40 CFR 63.7540(a)(19)(vi))**
  - (1). Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions in calculations and report any such periods in the annual deviation report. **(40 CFR 63.7540(a)(19)(vi)(A))**
  - (2). Any data collected during periods when the monitoring system is out of control as specified in the site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out of control periods in calculations used to report emissions or operating levels and report any such periods in the annual deviation report. **(40 CFR 63.7540(a)(19)(vi)(B))**
  - (3). Any data recorded during periods of startup or shutdown. **(40 CFR 63.7540(a)(19)(vi)(C))**
- vii. The permittee must record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with the site-specific monitoring plan. **(40 CFR 63.7540(a)(19)(vii))**

\* This reference appears to be a typographical error in the Federal Register and should refer to 40 CFR 63.7540(a)(19)(v).