appendix A–2, where the measured carbon dioxide is greater than 0.4 percent.

(2) If the measured percent carbon dioxide is equal to or less than 0.4 percent, you must use a correction factor (F) of 10.

(3) You must determine the corrected total hydrocarbons concentration by multiplying the measured total hydrocarbons concentration by the correction factor (F) determined for each compliance test.

(d) You must use the following test methods in appendix A of part 60 listed in paragraphs (d)(1) through (5) of this section, as specified, to determine compliance with the emissions standards for dioxins and furans specified in §63.543(c).

(1) EPA Method 1 at 40 CFR part 60, appendix A–1 to select the sampling port location and the number of traverse points.

(2) EPA Method 2 at 40 CFR part 60, appendix A–1 or EPA Method 5D at 40 CFR part 60, appendix A–3, section 8.3 for positive pressure fabric filters to measure volumetric flow rate.

(3) EPA Method 3A or 3B at 40 CFR part 60, appendix A–2 to determine the oxygen and carbon dioxide concentrations of the stack gas.

(4) EPA Method 4 at 40 CFR part 60, appendix A–3 to determine moisture content of the stack gas.

(5) EPA Method 23 at 40 CFR part 60, appendix A–7 to determine the dioxins and furans concentration.

(e) You must determine the dioxins and furans toxic equivalency by following the procedures in paragraphs (e)(1) through (3) of this section.

(1) Measure the concentration of each dioxins and furans congener shown in Table 3 of this subpart using EPA Method 23 at 40 CFR part 60, appendix A–7. You must correct the concentration of dioxins and furans in terms of toxic equivalency to 7 percent \( \text{O}_2 \) using Equation 3 of this section.

\[
C_{adj} = \frac{C_{meas}(20.9 - 7)}{(20.9 - \%\text{O}_2)}
\]

Where:

- \( C_{adj} \) = Dioxins and furans concentration adjusted to 7 percent oxygen.
- \( C_{meas} \) = Dioxins and furans concentration measured in nanograms per dry standard cubic meter.
- \((20.9 - 7)\) = 20.9 percent oxygen—7 percent oxygen (defined oxygen correction basis).
- \(20.9\) = Oxygen concentration in air, percent.
- \(\%\text{O}_2\) = Oxygen concentration measured on a dry basis, percent.

(2) For each dioxins and furans congener measured as specified in paragraph (e)(1) of this section, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 3 to this subpart.

(3) Sum the values calculated as specified in paragraph (e)(2) of this section to obtain the total concentration of dioxins and furans emitted in terms of toxic equivalency.

§ 63.548 Monitoring requirements.

(a) You must prepare, and at all times operate according to, a standard operating procedures manual that describes in detail procedures for inspection, maintenance, and bag leak detection and corrective action plans for all baghouses (fabric filters or cartridge filters) that are used to control process vents, process fugitive, or fugitive dust emissions from any source subject to the lead emissions standards in §§63.543, 63.544, and 63.545, including those used to control emissions from building ventilation.

(b) You must submit the standard operating procedures manual for baghouses required by paragraph (a) of this section to the Administrator or delegated authority for review and approval.

(c) The procedures that you specify in the standard operating procedures manual for inspections and routine
maintenance must, at a minimum, include the requirements of paragraphs (c)(1) through (9) of this section.

1. Daily monitoring of pressure drop across each baghouse cell.

2. Weekly confirmation that dust is being removed from hoppers through visual inspection, or equivalent means of ensuring the proper functioning of removal mechanisms.

3. Daily check of compressed air supply for pulse-jet baghouses.

4. An appropriate methodology for monitoring cleaning cycles to ensure proper operation.

5. Monthly check of bag cleaning mechanisms for proper functioning through visual inspection or equivalent means.

6. Monthly check of bag tension on reverse air and shaker-type baghouses. Such checks are not required for shaker-type baghouses using self-tensioning (spring loaded) devices.

7. Quarterly confirmation of the physical integrity of the baghouse through visual inspection of the baghouse interior for air leaks.

8. Quarterly inspection of fans for wear, material buildup, and corrosion through visual inspection, vibration detectors, or equivalent means.

9. Except as provided in paragraphs (g) and (h) of this section, continuous operation of a bag leak detection system, unless a system meeting the requirements of paragraph (m) of this section for a continuous emissions monitoring system is installed for monitoring the concentration of lead.

(d) The procedures you specify in the standard operating procedures manual for baghouse maintenance must include, at a minimum, a preventative maintenance schedule that is consistent with the baghouse manufacturer’s instructions for routine and long-term maintenance.

(e) The bag leak detection system required by paragraph (c)(9) of this section, must meet the specification and requirements of paragraphs (e)(1) through (8) of this section.

1. The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 1.0 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less.

2. The bag leak detection system sensor must provide output of relative particulate matter loadings.

3. The bag leak detection system must be equipped with an alarm system that will alarm when an increase in relative particulate loadings is detected over a preset level.

4. You must install and operate the bag leak detection system in a manner consistent with the guidance provided in “Office of Air quality Planning and Standards (OAQPS) Fabric Filter Bag Leak Detection Guidance” EPA–454/R–98–015, September 1997 (incorporated by reference, see §63.14) and the manufacturer’s written specifications and recommendations for installation, operation, and adjustment of the system.

5. The initial adjustment of the system must, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time.

6. Following initial adjustment, you must not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in the approved standard operating procedures manual required under paragraph (a) of this section.

7. For negative pressure, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, you must install the bag leak detector downstream of the baghouse and upstream of any wet acid gas scrubber.

8. Where multiple detectors are required, the system’s instrumentation and alarm may be shared among detectors.

(f) You must include in the standard operating procedures manual required by paragraph (a) of this section a corrective action plan that specifies the procedures to be followed in the case of
a bag leak detection system alarm. The corrective action plan must include, at a minimum, the procedures that you will use to determine and record the time and cause of the alarm as well as the corrective actions taken to minimize emissions as specified in paragraphs (f)(1) and (f)(2) of this section.

(1) The procedures used to determine the cause of the alarm must be initiated within 30 minutes of the alarm.

(2) The cause of the alarm must be alleviated by taking the necessary corrective action(s) that may include, but not be limited to, those listed in paragraphs (f)(2)(i) through (vi) of this section.

(i) Inspecting the baghouse for air leaks, torn or broken filter elements, or any other malfunction that may cause an increase in emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media, or otherwise repairing the control device.

(iv) Sealing off a defective baghouse compartment.

(v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

(vi) Shutting down the process producing the particulate emissions.

(g) Baghouses equipped with high efficiency particulate air (or HEPA) filters as a secondary filter used to control emissions from any source subject to the lead emission standards in §63.543(a) or (b), are exempt from the requirement to be equipped with a bag leak detection system.

(h) Baghouses followed by a wet electrostatic precipitator used as a secondary control device for any source subject to the lead emission standards in §63.543(a) or (b), are exempt from the requirement to be equipped with a bag leak detection system.

(i) If you use a wet scrubber to control particulate matter and metal hazardous air pollutant emissions from a process vent to demonstrate continuous compliance with the emissions standards, you must monitor and record the pressure drop and water flow rate of the wet scrubber during the initial performance or compliance test conducted to demonstrate compliance with the lead emission limit under §63.543(a) or (b). Thereafter, you must monitor and record the pressure drop and water flow rate values at least once every hour and you must maintain the pressure drop and water flow rate at levels no lower than 30 percent below the pressure drop and water flow rate measured during the initial performance or compliance test.

(j) You must comply with the requirements specified in paragraphs (j)(1) through (4) of this section to demonstrate continuous compliance with the total hydrocarbons and dioxins and furans emissions standards. During periods of startup and shutdown, the requirements of paragraph (j)(4) of this section do not apply. Instead, you must demonstrate compliance with the standard for total hydrocarbon by meeting the requirements of §63.543(1).

(1) Continuous temperature monitoring. You must install, calibrate, maintain, and continuously operate a device to monitor and record the temperature of the afterburner or furnace exhaust streams consistent with the requirements for continuous monitoring systems in §63.8.

(2) Prior to or in conjunction with the initial performance or compliance test to determine compliance with §63.543(c), you must conduct a performance evaluation for the temperature monitoring device according to §63.8(e). The definitions, installation specifications, test procedures, and
data reduction procedures for determining calibration drift, relative accuracy, and reporting described in Performance Specification 2, 40 CFR part 60, appendix B, sections 2, 3, 5, 7, 8, 9, and 10 must be used to conduct the evaluation. The temperature monitoring device must meet the following performance and equipment specifications:

(i) The recorder response range must include zero and 1.5 times the average temperature identified in paragraph (j)(3) of this section.

(ii) The monitoring system calibration drift must not exceed 2 percent of 1.5 times the average temperature identified in paragraph (j)(3) of this section.

(iii) The monitoring system relative accuracy must not exceed 20 percent.

(iv) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or an alternate reference, subject to the approval of the Administrator.

(3) You must monitor and record the temperature of the afterburner or the furnace exhaust streams every 15 minutes during the initial performance or compliance test for total hydrocarbons and dioxins and furans and determine an arithmetic average for the recorded temperature measurements.

(4) To demonstrate continuous compliance with the standards for total hydrocarbons and dioxins and furans, you must maintain an afterburner or exhaust temperature such that the average temperature in any 3-hour period does not fall more than 28 °Celsius (50 °Fahrenheit) below the average established in paragraph (j)(3) of this section.

(k) You must install, operate, and maintain a digital differential pressure monitoring system to continuously monitor each total enclosure as described in paragraphs (k)(1) through (5) of this section.

(1) You must install, operate, and maintain a minimum of one building digital differential pressure monitoring system at each of the following three walls in each total enclosure that has a total ground surface area of 10,000 square feet or more:

(i) The leeward wall.

(ii) The windward wall.

(iii) An exterior wall that connects the leeward and windward wall at a location defined by the intersection of a perpendicular line between a point on the connecting wall and a point on its furthest opposite exterior wall, and intersecting within plus or minus ten meters of the midpoint of a straight line between the two other monitors specified. The midpoint monitor must not be located on the same wall as either of the other two monitors.

(2) You must install and maintain a minimum of one building digital differential pressure monitoring system at the leeward wall of each total enclosure that has a total ground surface area of less than 10,000 square feet.

(3) The digital differential pressure monitoring systems must be certified by the manufacturer to be capable of measuring and displaying negative pressure in the range of 0.01 to 0.2 millimeters mercury (0.005 to 0.11 inches of water) with a minimum accuracy of plus or minus 0.001 millimeters of mercury (0.0005 inches of water).

(4) You must equip each digital differential pressure monitoring system with a continuous recorder.

(5) You must calibrate each digital differential pressure monitoring system in accordance with manufacturer’s specifications at least once every 12 calendar months or more frequently if recommended by the manufacturer.

(l) Except as provided in paragraphs (l)(2) or (3) of this section, all new or reconstructed sources subject to the requirements under §63.543 must install, calibrate, maintain, and operate a CEMS for measuring lead emissions. In addition to the General Provisions requirements for CEMS in §63.8(c) that are referenced in Table 1 to this subpart, you must comply with the requirements for CEMS specified in paragraph (m) of this section.

(1) Sources subject to the emissions limits for lead compounds under §63.543(b) must install a CEMS for measuring lead emissions within 180 days of promulgation by the EPA of performance specifications for lead CEMS.

(2) Prior to 180 days after the EPA promulgates performance specifications for CEMS used to measure lead
§ 63.550 Recordkeeping and reporting requirements.

(a) You must comply with all of the recordkeeping and reporting requirements specified in §63.10 that are referenced in Table 1 to this subpart.

(1) Records must be maintained in a form suitable and readily available for expeditious review, according to §63.10(b)(1). However, electronic recordkeeping and reporting if suitable for the specific case (e.g., by electronic