

(b) *Baghouses equipped with bag leak detection systems.* The owner or operator of a new or reconstructed submerged arc furnace must install and continuously operate a bag leak detection system if the furnace's primary and/or tapping emissions are ducted to a negative pressure baghouse or to a positive pressure baghouse equipped with a stack. The owner or operator must maintain and operate each baghouse such that the following conditions are met:

(1) The alarm on the system does not sound for more than 5 percent of the total operating time in a 6-month reporting period.

(2) A record is made of the date and time of each alarm and procedures to determine the cause of the alarm are initiated within 1 hour of the alarm according to the plan for corrective action required under § 63.1657(a)(7).

§ 63.1655 Maintenance requirements.

(a) The owner or operator of an affected source must comply with the requirements of § 63.6(e) of subpart A.

(b)(1) The owner or operator must develop and implement a written maintenance plan for each air pollution control device associated with submerged arc furnaces, metal oxygen refining processes, and crushing and screening operations subject to the provisions of this part. The owner or operator must keep the maintenance plan on record and available for the Administrator's inspection for the life of the air pollution control device or until the affected source is no longer subject to the provisions of this part.

(2) To satisfy the requirement to develop maintenance plans, the owner or operator may use the affected source's standard operating procedures (SOP) manual or other plan, provided the alternative plan meets the requirements of this paragraph and is made available for inspection when requested by the Administrator.

(c) The procedures specified in the maintenance plan must include a preventive maintenance schedule that is consistent with good air pollution control practices for minimizing emissions and, for baghouses, ensure that the requirements specified in § 63.1657(a) are met.

(d) The owner or operator must perform monthly inspections of the equipment that is important to the performance of the furnace capture system. This inspection must include an examination of the physical condition of the equipment, suitable for detecting holes in ductwork or hoods, flow constrictions in ductwork due to dents or accumulated dust, and operational status of flow rate controllers (pressure sensors, dampers, damper switches, etc.). Any deficiencies must be recorded and proper maintenance and repairs performed.

§ 63.1656 Performance testing, test methods, and compliance demonstrations.

(a) *Performance testing.* (1) All performance tests must be conducted according to the requirements in § 63.7 of subpart A.

(2) Each performance test must consist of three separate and complete runs using the applicable test methods.

(3) Each run must be conducted under conditions that are representative of normal process operations.

(4) Performance tests conducted on air pollution control devices serving submerged arc furnaces must be conducted such that at least one tapping period, or at least 20 minutes of a tapping period, whichever is less, is included in at least two of the three runs. The sampling time for each run must be at least as long as three times the average tapping period of the tested furnace, but no less than 60 minutes.

(5) The sample volume for each run must be at least 0.9 dscm (30 dscf).

(b) *Test methods.* The following test methods in Appendix A of part 60 of this chapter must be used to determine compliance with the emission standards.

(1) Method 1 to select the sampling port location and the number of traverse points.

(2) Method 2 to determine the volumetric flow rate of the stack gas.

(3) Method 3 to determine the dry molecular weight of the stack gas.

(4) Method 4 to determine the moisture content of the stack gas.

(5) Method 5 to determine the particulate matter concentration of the stack gas for negative pressure

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baghouses and positive pressure baghouses with stacks.

(6) Method 5D to determine particulate matter concentration and volumetric flow rate of the stack gas for positive pressure baghouses without stacks.

(7) Method 9 to determine opacity.

(8) The owner or operator may use equivalent alternative measurement methods approved by the Administrator following the procedures described in §63.7(f) of subpart A.

(c) *Compliance demonstration with the emission standards.* (1) The owner or operator must conduct an initial performance test for air pollution control devices or vent stacks subject to §63.1652(a) through (e) to demonstrate compliance with the applicable emission standards.

(2) The owner or operator must conduct annual performance tests for the air pollution control devices and vent stacks associated with the submerged arc furnaces, with the exception of any air pollution control devices that serve tapping emissions combined with non-furnace emissions, such as the MOR process or equipment associated with crushing and screening. Also excluded are air pollution control devices that serve dedicated non-furnace emissions, such as the MOR process or equipment associated with crushing and screening. The results of these annual tests will be used to demonstrate compliance with the emission standards in §63.1652(a) through (e), as applicable.

(3) Following development, and approval, if required, of the site-specific test plan, the owner or operator must conduct a performance test for each air pollution control device or vent stack to measure particulate matter and determine compliance with the applicable standard.

(i) An owner or operator of sources subject to the particulate matter concentration standards in §63.1652(a)(2), (d), or (e), must determine compliance as follows:

(A) Determine the particulate matter concentration using Method 5 or 5D, as applicable.

(B) Compliance is demonstrated if the average concentration for the three runs comprising the performance test does not exceed the standard.

(ii) An owner or operator of sources subject to the particulate mass rate standards in §63.1652(b) or (c) must determine compliance as follows:

(A) Determine the particulate matter concentration and volumetric flow rate using Method 5 or 5D, as applicable.

(B) Compute the mass rate (E_M) of particulate matter for each run using the following equation:

$$E_M = \left[\sum_{i=1}^N C_{si} Q_{sdi} \right] / K$$

Where:

E_M = mass rate of particulate matter, kg/hr (lb/hr).

N = total number of exhaust streams at which emissions are quantified.

C_{si} = concentration of particulate matter from exhaust stream "i", mg/dscm (gr/dscf).

Q_{sdi} = volumetric flow rate of effluent gas from exhaust stream "i", dscm/hr (dscf/hr)

K = conversion factor, 1×10^6 mg/kg (7,000 gr/lb).

(C) Compliance is demonstrated if the average of the mass rates for the three runs comprising the performance test does not exceed the standard.

(iii) An owner or operator of sources subject to the particulate matter process-weighted rate standard in §63.1652(a)(1) must determine compliance as follows:

(A) Determine particulate matter concentration and volumetric flow rate using Method 5 or 5D, as applicable.

(B) Compute the process-weighted mass rate (E_P) of particulate matter for each run using the following equation:

$$E_P = \left[\sum_{i=1}^N C_{si} Q_{sdi} \right] / PK$$

Where:

E_P = process-weighted mass rate of particulate matter, kg/hr/MW (lb/hr/MW).

N = total number of exhaust streams at which emissions are quantified.

C_{si} = concentration of particulate matter from exhaust stream "i", mg/dscm (gr/dscf)

Q_{sdi} = volumetric flow rate of effluent gas from exhaust stream "i", dscm/hr (dscf/hr)

P = Average furnace power input, MW

K = conversion factor, 1×10^6 mg/kg (7,000 gr/lb).

(C) Compliance is demonstrated if the average process-weighted mass rate

for the three runs comprising the performance test does not exceed the standard.

(4) If a venturi scrubber is used to comply with the emission standards, the owner or operator must establish as a site-specific operating parameter the lowest average pressure drop on any individual complying run in the three runs constituting any compliant test. The pressure drop must be monitored at least every 5 minutes during the test and hourly averages recorded.

(i) [Reserved]

(ii) The owner or operator may augment the data obtained under paragraph (a)(4) of this section by conducting multiple performance tests to establish a range of compliant operating parameter values. The lowest value of this range would be selected as the operating parameter monitoring value. The use of historic compliance data may be used to establish the compliant operating parameter value if the previous values were recorded during performance tests using the same test methods specified in this subpart and established as required in paragraph (a)(4) of this section.

(d) *Compliance demonstration with opacity standards.* (1)(i) The owner or operator subject to § 63.1653 must conduct initial opacity observations of the shop building to demonstrate compliance with the applicable opacity standards according to § 63.6(h)(5), which addresses the conduct of opacity or visible emission observations.

(ii) In conducting the opacity observations of the shop building, the observer must limit his or her field of view to the area of the shop building roof monitor that corresponds to the placement of the affected submerged arc furnaces.

(iii) The owner or operator must conduct the opacity observations according to EPA Method 9 of 40 CFR part 60, appendix A, for a minimum of 60 minutes.

(2)(i) When demonstrating initial compliance with the shop building opacity standard, as required by paragraph (d)(1) of this section, the owner or operator must simultaneously establish parameter values for one of the following: the control system fan motor amperes and all capture system damper

positions, the total volumetric flow rate to the air pollution control device and all capture system damper positions, or volumetric flow rate through each separately ducted hood that comprises the capture system.

(ii) The owner or operator may petition the Administrator to reestablish these parameters whenever he or she can demonstrate to the Administrator's satisfaction that the submerged arc furnace operating conditions upon which the parameters were previously established are no longer applicable. The values of these parameters determined during the most recent demonstration of compliance must be maintained at the appropriate level for each applicable period.

(3) The owner or operator must demonstrate continuing compliance with the opacity standards by following the monitoring requirements specified in § 63.1657(c) and the reporting and recordkeeping requirements specified in §§ 63.1659(b)(4) and 63.1660(b).

(e) *Compliance demonstration with the operational and work practice standards—(1) Fugitive dust sources.* Failure to have a fugitive dust control plan or failure to report deviations from the plan and take necessary corrective action would be a violation of the general duty to ensure that fugitive dust sources are operated and maintained in a manner consistent with good air pollution control practices for minimizing emissions per § 63.6(e)(1)(i) of subpart A.

(2) *Baghouses equipped with bag leak detection systems.* The owner or operator demonstrates compliance with the bag leak detection system requirements by submitting reports as required by § 63.1659(b)(5) showing that the alarm on the system does not sound for more than 5 percent of the total operating time in a 6-month period. Calculate the percentage of total operating time the alarm on the bag leak detection system sounds as follows:

(i) Do not include alarms that occur due solely to a malfunction of the bag leak detection system in the calculation.

(ii) Do not include alarms that occur during startup, shutdown, and malfunction in the calculation if the condition is described in the startup, shutdown, and malfunction plan and the

owner or operator operates the source during such periods in accordance with § 63.6(e)(1).

(iii) Count 1 hour of alarm time for each alarm where the owner or operator initiates procedures to determine the cause within 1 hour of the alarm.

(iv) Count the actual time it takes the owner or operator to initiate procedures to determine the cause of the alarm for each alarm where the owner or operator does not initiate procedures to determine the cause within 1 hour of the alarm.

(v) Calculate the percentage of time the alarm on the bag leak detection system sounds as the ratio of the sum of alarm times to the total operating time multiplied by 100.

[64 FR 27458, May 20, 1999, as amended at 71 FR 20462, Apr. 20, 2006]

§ 63.1657 Monitoring requirements.

(a) *Baghouses*. (1) For the baghouses serving the submerged arc furnaces, the metal oxygen refining process, and crushing and screening operations, the owner or operator must observe on a daily basis for the presence of any visible emissions.

(2) In addition to the daily visible emissions observation, the owner or operator must conduct the following activities:

(i) Daily monitoring of pressure drop across each baghouse cell, or across the baghouse if it is not possible to monitor each cell individually, to ensure the pressure drop is within the normal operating range identified in the baghouse maintenance plan.

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

(iii) Daily check of compressed air supply for pulse-jet baghouses.

(iv) An appropriate methodology for monitoring cleaning cycles to ensure proper operation.

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

(vi) Quarterly visual check of bag tension on reverse air and shaker-type baghouses to ensure that the bags are not kinked (knead or bent) or laying on

their sides. Such checks are not required for shaker-type baghouses using self-tensioning (spring loaded) devices.

(vii) Quarterly confirmation of the physical integrity of the baghouse structure through visual inspection of the baghouse interior for air leaks.

(viii) Semiannual inspection of fans for wear, material buildup, and corrosion through visual inspection, vibration detectors, or equivalent means.

(3) In addition to meeting the requirements of paragraphs (a)(1) and (a)(2) of this section, the owner or operator of a new or reconstructed submerged arc furnace must install and continuously operate a bag leak detection system if the furnace primary and/or tapping emissions are ducted to a negative pressure baghouse or to a positive pressure baghouse equipped with a stack. The bag leak detection system must meet the following requirements:

(i) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative particulate matter loadings, and the owner or operator must continuously record the output from the bag leak detection system.

(iii) The bag leak detection system must be equipped with an alarm system that will sound when an increase in relative particulate loadings is detected over a preset level. The alarm must be located where it can be heard by the appropriate plant personnel.

(iv) Each bag leak detection system that works based on the triboelectric effect must be installed, calibrated, operated, and maintained consistent with the U.S. Environmental Protection Agency guidance document "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015). Other bag leak detection systems must be installed, calibrated, and maintained consistent with the manufacturer's written specifications and recommendations.