**Section 217.157 Testing and Monitoring**

a) Industrial Boilers and Process Heaters

1) The owner or operator of an industrial boiler subject to Subpart E of this Part with a rated heat input capacity greater than 250 mmBtu/hr must install, calibrate, maintain, and operate a continuous emissions monitoring system on the emission unit for the measurement of NOx emissions discharged into the atmosphere in accordance with 40 CFR 75, as incorporated by reference in Section 217.104. However, the owner or operator of an industrial boiler subject to Subpart E of this Part with a rated heat input capacity greater than 250 mmBtu/hr that combusts blast furnace gas with up to 10% natural gas on an annual basis and located at a source that manufactures iron and steel is not required to install, calibrate, maintain, and operate a continuous emissions monitoring system on that industrial boiler, provided the heat input from natural gas does not exceed 10% on an annual basis and the owner or operator complies with the performance test requirements under this Section and demonstrates, during each performance test, that NOx emissions from the industrial boiler are less than 70% of the applicable emissions limitation under Section 217.164. In the event the owner or operator is unable to meet the requirements of this exception, a continuous emissions monitoring system is required within 12 months after that event, or by January 1, 2015, whichever is later.

2) The owner or operator of an industrial boiler subject to Subpart E of this Part with a rated heat input capacity greater than 100 mmBtu/hr but less than or equal to 250 mmBtu/hr must install, calibrate, maintain, and operate a continuous emissions monitoring system on such emission unit for the measurement of NOx emissions discharged into the atmosphere in accordance with 40 CFR 60, subpart A and appendix B, Performance Specifications 2 and 3, and appendix F, Quality Assurance Procedures, as incorporated by reference in Section 217.104.

3) The owner or operator of a process heater subject to Subpart F of this Part with a rated heat input capacity greater than 100 mmBtu/hr must install, calibrate, maintain, and operate a continuous emissions monitoring system on the emission unit for the measurement of NOx emissions discharged into the atmosphere in accordance with 40 CFR 60, subpart A and appendix B, Performance Specifications 2 and 3, and appendix F, Quality Assurance Procedures, as incorporated by reference in Section 217.104.

4) If demonstrating compliance through an emissions averaging plan, the owner or operator of an industrial boiler subject to Subpart E of this Part, or a process heater subject to Subpart F of this Part, with a rated heat input capacity less than or equal to 100 mmBtu/hr and not demonstrating compliance through a continuous emissions monitoring system must have an initial performance test conducted pursuant to subsection (a)(4)(B) of this Section and Section 217.154.

A) An owner or operator of an industrial boiler or process heater must have subsequent performance tests conducted pursuant to subsection (a)(4)(B) of this Section at least once every five years. When, in the opinion of the Agency or USEPA, it is necessary to conduct testing to demonstrate compliance with Section 217.164 or 217.184, as applicable, the owner or operator of an industrial boiler or process heater must, at his or her own expense, have such test conducted in accordance with the applicable test methods and procedures specified in this Section within 90 days after receipt of a notice to test from the Agency or USEPA.

B) The owner or operator of an industrial boiler or process heater must have a performance test conducted using 40 CFR 60, subpart A and appendix A, Method 1, 2, 3, 4, 7E, or 19, as incorporated by reference in Section 217.104, or other alternative USEPA methods approved by the Agency. Each performance test must consist of three separate runs, each lasting a minimum of 60 minutes. NOx emissions must be measured while the industrial boiler is operating at maximum operating capacity or while the process heater is operating at normal maximum load. If the industrial boiler or process heater has combusted more than one type of fuel in the prior year, a separate performance test is required for each fuel. If a combination of fuels is typically used, a performance test may be conducted, with Agency approval, on such combination of fuels typically used. Except as provided under subsection (e) of this Section, this subsection (a)(4)(B) does not apply if such owner or operator is demonstrating compliance with an emissions limitation through a continuous emissions monitoring system under subsection (a)(1), (a)(2), (a)(3), or (a)(5) of this Section.

5) Instead of complying with the requirements of subsection (a)(4) of this Section, an owner or operator of an industrial boiler subject to Subpart E of this Part, or a process heater subject to Subpart F of this Part, with a rated heat input capacity less than or equal to 100 mmBtu/hr may install and operate a continuous emissions monitoring system on such emission unit in accordance with the applicable requirements of 40 CFR 60, subpart A and appendix B, Performance Specifications 2 and 3, and appendix F, Quality Assurance Procedures, as incorporated by reference in Section 217.104. The continuous emissions monitoring system must be used to demonstrate compliance with the applicable emissions limitation or emissions averaging plan on an ozone season and annual basis.

6) Notwithstanding subsection (a)(2) of this Section, the owner or operator of an auxiliary boiler subject to Subpart E of this Part with a rated heat input capacity less than or equal to 250 mmBtu/hr and a capacity factor of less than or equal to 20% is not required to install, calibrate, maintain, and operate a continuous emissions monitoring system on such boiler for the measurement of NOx emissions discharged into the atmosphere, but must comply with the performance test requirements under subsection (a)(4) of this Section.

b) Glass Melting Furnaces; Cement Kilns; Lime Kilns; Iron and Steel Reheat, Annealing, and Galvanizing Furnaces; and Aluminum Reverberatory and Crucible Furnaces

1) An owner or operator of a glass melting furnace subject to Subpart G of this Part, cement kiln or lime kiln subject to Subpart H of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart I of this Part, or aluminum reverberatory or crucible furnace subject to Subpart I of this Part that has the potential to emit NOx in an amount equal to or greater than one ton per day must install, calibrate, maintain, and operate a continuous emissions monitoring system on such emission unit for the measurement of NOx emissions discharged into the atmosphere in accordance with 40 CFR 60, subpart A and appendix B, Performance Specifications 2 and 3, and appendix F, Quality Assurance Procedures, as incorporated by reference in Section 217.104.

2) An owner or operator of a glass melting furnace subject to Subpart G of this Part, cement kiln or lime kiln subject to Subpart H of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart I of this Part, or aluminum reverberatory or crucible furnace subject to Subpart I of this Part that has the potential to emit NOx in an amount less than one ton per day must have an initial performance test conducted pursuant to subsection (b)(4) of this Section and Section 217.154.

3) An owner or operator of a glass melting furnace subject to Subpart G of this Part, cement kiln or lime kiln subject to Subpart H of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart I of this Part, or aluminum reverberatory or crucible furnace subject to Subpart I of this Part that has the potential to emit NOx in an amount less than one ton per day must have subsequent performance tests conducted pursuant to subsection (b)(4) of this Section as follows:

A) For all glass melting furnaces subject to Subpart G of this Part, cement kilns or lime kilns subject to Subpart H of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart I of this Part, or aluminum reverberatory or crucible furnaces subject to Subpart I of this Part, including all such units included in an emissions averaging plan, at least once every five years; and

B) When, in the opinion of the Agency or USEPA, it is necessary to conduct testing to demonstrate compliance with Section 217.204, 217.224, or 217.244 of this Part, as applicable, the owner or operator of a glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace must, at his or her own expense, have such test conducted in accordance with the applicable test methods and procedures specified in this Section within 90 days after receipt of a notice to test from the Agency or USEPA.

4) The owner or operator of a glass melting furnace, cement kiln, or lime kiln must have a performance test conducted using 40 CFR 60, subpart A and appendix A, Methods 1, 2, 3, 4, and 7E, as incorporated by reference in Section 217.104 of this Part, or other alternative USEPA methods approved by the Agency. The owner or operator of an iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace must have a performance test conducted using 40 CFR 60, subpart A and appendix A, Method 1, 2, 3, 4, 7E, or 19, as incorporated by reference in Section 217.104 of this Part, or other alternative USEPA methods approved by the Agency. Each performance test must consist of three separate runs, each lasting a minimum of 60 minutes. NOx emissions must be measured while the glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace is operating at maximum operating capacity. If the glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace has combusted more than one type of fuel in the prior year, a separate performance test is required for each fuel. Except as provided under subsection (e) of this Section, this subsection (b)(4) does not apply if such owner or operator is demonstrating compliance with an emissions limitation through a continuous emissions monitoring system under subsection (b)(1) or (b)(5) of this Section.

5) Instead of complying with the requirements of subsections (b)(2), (b)(3), and (b)(4) of this Section, an owner or operator of a glass melting furnace subject to Subpart G of this Part, cement kiln or lime kiln subject to Subpart H of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart I of this Part, or aluminum reverberatory or crucible furnace subject to Subpart I of this Part that has the potential to emit NOx in an amount less than one ton per day may install and operate a continuous emissions monitoring system on such emission unit in accordance with the applicable requirements of 40 CFR 60, subpart A and appendix B, Performance Specifications 2 and 3, and appendix F, Quality Assurance Procedures, as incorporated by reference in Section 217.104 of this Part. The continuous emissions monitoring system must be used to demonstrate compliance with the applicable emissions limitation or emissions averaging plan on an ozone season and annual basis.

c) Fossil Fuel-Fired Stationary Boilers. The owner or operator of a fossil fuel-fired stationary boiler subject to Subpart M of this Part must install, calibrate, maintain, and operate a continuous emissions monitoring system on such emission unit for the measurement of NOx emissions discharged into the atmosphere in accordance with 40 CFR 96, subpart H.

d) Common Stacks. If two or more emission units subject to Subpart E, F, G, H, I, M, or Q of this Part are served by a common stack and the owner or operator of such emission units is operating a continuous emissions monitoring system, the owner or operator may, with written approval from the Agency, utilize a single continuous emissions monitoring system for the combination of emission units subject to Subpart E, F, G, H, I, M, or Q of this Part that share the common stack, provided such emission units are subject to an emissions averaging plan under this Part.

e) Compliance with the continuous emissions monitoring system (CEMS) requirements by an owner or operator of an emission unit who is required to install, calibrate, maintain, and operate a CEMS on the emission unit under subsection (a)(1), (a)(2), (a)(3), or (b)(1) of this Section, or who has elected to comply with the CEMS requirements under subsection (a)(5) or (b)(5) of this Section, or who has elected to comply with the predictive emission monitoring system (PEMS) requirements under subsection (f) of this Section, is required by the applicable compliance date under Section 217.152 of this Subpart.

f) As an alternative to complying with the requirements of this Section, other than the requirements under subsections (a)(1) and (c) of this Section, the owner or operator of an emission unit who is not otherwise required by any other statute, regulation, or enforceable order to install, calibrate, maintain, and operate a CEMS on the emission unit may comply with the specifications and test procedures for a predictive emission monitoring system (PEMS) on the emission unit for the measurement of NOx emissions discharged into the atmosphere in accordance with the requirements of 40 CFR 60, subpart A and appendix B, Performance Specification 16. The PEMS must be used to demonstrate compliance with the applicable emissions limitation or emissions averaging plan on an ozone season and annual basis.

(Source: Amended at 35 Ill. Reg. 14627, effective August 22, 2011)