

CHAPTER 129 – Standards for Sources

ADDITIONAL NO_x REQUIREMENTS

§ 129.201. Boilers.

(a) By May 1, 2005, and each year thereafter, the owner or operator of a boiler that meets the definition of a boiler in § 145.2 (relating to definitions) located in Bucks, Chester, Delaware, Montgomery or Philadelphia County shall comply with this section and § 129.204 (relating to emission accountability). This section does not apply to naval marine combustion units operated by the United States Navy for the purposes of testing and operational training or to units that combust municipal waste at a facility that is permitted as a resource recovery facility under Part I, Subpart D, Article VIII (relating to municipal waste).

(b) By October 31, 2005, and each year thereafter, the owner or operator of the boiler shall calculate the difference between the actual emissions from the unit for the period from May 1 through September 30 and the allowable emissions for that period.

(c) The owner or operator shall calculate allowable emissions by multiplying the unit's cumulative heat input for the period by the applicable emission rate set forth in paragraph (1) or (2).

(1) The emission rate for a boiler with a nameplate rated capacity of greater than 100 million Btu/hour but less than or equal to 250 million Btu/hour shall be as follows:

(i) For a boiler firing natural gas or a boiler firing a noncommercial gaseous fuel, 0.10 pounds NO_x per million Btu heat input.

(ii) For a boiler firing solid or liquid fuel, 0.20 pounds of NO_x per million Btu heat input.

(2) The emission rate for a boiler with a nameplate rated capacity of greater than 250 million Btu/hour that is not subject to §§ 145.1–145.7, 145.10–145.14, 145.30, 145.31, 145.40–145.43, 145.50–145.57, 145.60–145.62 and 145.70–145.76 shall be 0.17 pounds NO_x per million Btu heat

§ 129.202. Stationary combustion turbines.

(a) By May 1, 2005, and each year thereafter, the owner or operator of a stationary combustion turbine with a nameplate rated capacity of greater than 100 million Btu/hour located in Bucks, Chester, Delaware, Montgomery or Philadelphia County shall comply with this section and § 129.204 (relating to emission accountability). This section does not apply to naval marine stationary combustion turbines operated by the United States Navy for the purposes of testing

and operational training.

(b) By October 31, 2005, and each year thereafter, the owner or operator of the stationary combustion turbine shall calculate the difference between the actual emissions from the unit for the period from May 1 through September 30 and the allowable emissions for that period.

(c) The owner or operator shall calculate allowable emissions by multiplying the unit's cumulative heat input for the period by the applicable emission rate set forth in paragraph (1) or (2).

(1) The emission rate for a stationary combustion turbine with a nameplate rated capacity of greater than 100 million Btu/hour but less than or equal to 250 million Btu/hour heat input shall be as follows:

(i) A combined cycle or regenerative cycle stationary combustion turbine:

(A) When firing natural gas or a noncommercial gaseous fuel, 0.17 lbs NO_x /MMBtu or 1.3 lbs NO_x/MWH.

(B) When firing oil, 0.26 lbs NO_x/MMBtu or 2.0 lbs NO_x/MWH.

(ii) A simple cycle stationary combustion turbine:

(A) When firing natural gas or a noncommercial gaseous fuel, 0.20 lbs NO_x/MMBtu or 2.2 lbs NO_x/MWH.

(B) When firing oil, 0.30 lbs NO_x/MMBtu or 3.0 lbs NO_x/MWH.

(2) The emission rate for a stationary combustion turbine with a nameplate rated capacity of greater than 250 million Btu/hour heat input that is not subject to §§ 145.1—145.7, 145.10—145.14, 145.30, 145.31, 145.40—145.43, 145.50—145.57, 145.60—145.62 and 145.70—145.76 is 0.17 lb NO_x per million Btu heat input. The owner or operator of a stationary combustion turbine may demonstrate compliance with this paragraph through the provisions of §§ 145.80—145.88 (relating to opt-in process).

§ 129.203. Stationary internal combustion engines.

(a) By May 1, 2005, the owner or operator of a stationary internal combustion engine rated at greater than 1,000 horsepower and located in Bucks, Chester, Delaware, Montgomery or Philadelphia County shall comply with this section and § 129.204 (relating to emission accountability). This section does not apply to naval marine combustion units operated by the United States Navy for the purposes of testing and operational training or to stationary internal combustion engines regulated under Chapter 145, Subchapter B (relating to emissions of NO_x from stationary internal combustion engines).

(b) By October 31, 2005, and each year thereafter, the owner or operator of the stationary internal combustion engine shall calculate the difference between the actual emissions from the unit during the period from May 1 through September 30 and the allowable emissions for that period.

(c) The owner or operator shall calculate allowable emissions by multiplying the cumulative hours of operations for the unit for the period by the horsepower rating of the unit and by the applicable emission rate set forth in paragraph (1) or (2).

(1) For a spark-ignited engine, 3.0 grams of NO_x per brake horsepowerhour.

(2) For a compression ignition stationary internal combustion engine firing diesel fuel or a combination of diesel fuel and natural gas, 2.3 grams of NO_x per brake horsepower-hour.

(d) Emissions from a stationary internal combustion engine that has been or is replaced by an electric motor may be counted as allowable emissions for purposes of this section and § 129.204, as follows:

(1) For a replaced spark-ignited engine, 3.0 grams of NO_x per brake horsepower-hour of the replacement motor, less 1.5 pounds of NO_x per MWH of electricity consumed by the replacement motor.

(2) For a replaced compression ignition stationary internal combustion engine that fired diesel fuel or a combination of diesel fuel and natural gas, 2.3 grams of NO_x per brake horsepower-hour, less 1.5 pounds of NO_x per MWH of electricity consumed by the replacement motor.

§ 129.204. Emission accountability.

(a) This section applies to units described in §§ 129.201—129.203 (relating to boilers; stationary combustion turbines; and stationary internal combustion engines).

(b) The owner or operator shall determine actual emissions in accordance with one of the following:

(1) If the owner or operator of the unit is required to monitor NO_x emissions with a CEMS operated and maintained in accordance with a permit or State or Federal regulation, the CEMS data reported to the Department to comply with the monitoring and reporting requirements of this article shall be used. Any data invalidated under Chapter 139 (relating to sampling and testing) shall be substituted with data calculated using the potential emission rate for the unit or, if approved by the Department in writing, an alternative amount of emissions that is more representative of actual emissions that occurred during the period of invalid data.

(2) If the owner or operator of the unit is not required to monitor NO_x emissions with a CEMS, one of the following shall be used to determine actual emissions of NO_x:

(i) The 1-year average emission rate calculated from the most recent permit emission limit compliance demonstration test data for NO_x.

(ii) The maximum hourly allowable NO_x emission rate contained in the permit or the higher of the following:

(A) The highest rate determined by use of the emission factor for the unit class contained in the most up-to-date version of the EPA publication, “*AP-42 Compilation of Air Pollution Emission Factors.*”

(B) The highest rate determined by use of the emission factor for the unit class contained in the most up-to-date version of EPA’s “Factor Information Retrieval (FIRE)” data system.

(iii) CEMS data, if the owner or operator elects to monitor NO_x emissions with a CEMS. The owner or operator shall monitor emissions and report the data from the CEMS in accordance with Chapter 139 or Chapter 145 (relating to interstate pollution transport reduction). Any data invalidated under Chapter 139 shall be substituted with data calculated using the potential emission rate for the unit or, if approved by the Department in writing, an alternative amount of emissions that is more representative of actual emissions that occurred during the period of invalid data.

(iv) An alternate calculation and recordkeeping procedure based upon emissions testing and correlations with operating parameters. The operator of the unit shall demonstrate that the alternate procedure does not underestimate actual emissions throughout the allowable range of operating conditions. In regard to obtaining the Department’s approval for an alternate calculation method and recordkeeping procedure for actual emissions, the owner or operator may request an adjustment to the allowable emissions calculations set forth in §§ 129.201—129.203. An allowable emission adjustment may not overestimate a unit’s allowable emissions and must be based upon the parameters and procedures proposed in the alternate calculation method for actual emissions. The alternate calculation and recordkeeping procedures must be approved by the Department, in writing, prior to implementation.

(c) The owner or operator of a unit subject to this section shall surrender to the Department one CAIR NO_x allowance and one CAIR NO_x Ozone Season allowance, as defined in 40 CFR 96.102 and 96.302 (relating to definitions), for each ton of NO_x by which the combined actual emissions exceed the allowable emissions of the units subject to this section at a facility from May 1 through September 30. The surrendered allowances shall be of current year vintage. For the purpose of determining the amount of allowances to surrender, any remaining fraction of a ton equal to or greater than 0.50 ton is deemed to equal 1 ton and any fraction of a ton less than 0.50 ton is deemed to equal zero tons.

(d) If the combined allowable emissions from units subject to this section at a facility from May 1 through September 30 exceed the combined actual emissions from units subject to this section

at the facility during the same period, the owner or operator may deduct the difference or any portion of the difference from the amount of actual emissions from units subject to this section at the owner or operator's other facilities.

(e) By November 1, 2005, and by November 1 of each year thereafter, an owner or operator of a unit subject to this section shall surrender the required NOx allowances to the Department's designated NOx allowance tracking system account and provide to the Department, in writing, the following:

(1) The serial number of each NOx allowance surrendered.

(2) The calculations used to determine the quantity of NOx allowances required to be surrendered.

(f) If an owner or operator fails to comply with subsection (e), the owner or operator shall by December 31 surrender three NOx allowances of the current or later year vintage for each NOx allowance that was required to be surrendered by November 1 of that year.

(g) The surrender of NOx allowances under subsection (f) does not affect the liability of the owner or operator of the unit for any fine, penalty or assessment, or an obligation to comply with any other remedy for the same violation, under the CAA or the act.

(1) For purposes of determining the number of days of violation, if a facility has excess emissions for the period May 1 through September 30, each day in that period (153 days) constitutes a day in violation unless the owner or operator of the unit demonstrates that a lesser number of days should be considered.

(2) Each ton of excess emissions is a separate violation.

§ 129.205. Zero emission renewable energy production credit.

In calculating actual emissions from a facility under § 129.204 (relating to emission accountability), the owner or operator may deduct 1.5 pounds of NOx per MWH of electricity or thermal power equivalent for each MWH of zero emission renewable energy produced, if the following conditions are met:

(1) The zero emission renewable energy production is certified in a tradable renewable certificate.

(2) The zero emission renewable energy was generated by a power source that produced zero emissions and used 100% renewable energy, such as solar or wind power, in producing the renewable energy. For hydropower, the power must be generated without the use of a dam.

(3) The zero emission renewable energy power source was originally brought into production on or after December 11, 2004.

(4) The zero emission renewable energy power source is located in Bucks, Chester,

Delaware, Montgomery or Philadelphia County.

(5) The owner or operator surrenders the renewable tradable certificate to the Department.

(6) The owner or operator certifies that the conditions of this section have been satisfied.

[Regulation added. The SIP effective date is 10/30/06; Sections 129.201, 129.202 and 129.204 are revised. The SIP effective date is 12/10/09.]