

Proposed Regulation

REGULATION NO. 1142

SPECIFIC EMISSION CONTROL REQUIREMENTS

xx/xx/200x

2.0 Control of NO_x Emissions from Industrial Boilers and Process Heaters at Petroleum Refineries

2.1 Purpose

The purpose of Section 2.0 of this regulation is to reduce NO_x emissions from Delaware's large industrial boilers and process heaters that are located at petroleum refineries.

Under the 8-hour ozone national ambient air quality standard (NAAQS), the state of Delaware is part of the Philadelphia-Wilmington-Atlantic City, PA-DE-MD-NJ moderate non-attainment area (NAA). The entire NAA, including Delaware, is required by the Clean Air Act (CAA) to attain the 8-hour ozone NAAQS by 2010. After attainment, the area must maintain compliance with the NAAQS. By implementing Section 2.0 of this regulation, NO_x emission reductions from the affected boilers and heaters shall contribute to (1) attainment and maintenance of the 8-hour ozone standard, and (2) improvement of the ambient air quality, in both Delaware and the entire NAA.

Additionally, New Castle County of Delaware is a part of the Philadelphia-Wilmington-Camden, PA-DE-NJ NAA for the annual fine particulate matter (PM_{2.5}) NAAQS, and is required by the CAA to attain the NAAQS by 2010. Since NO_x is a significant precursor to PM_{2.5} formation, reducing NO_x emissions will also assist in attainment and maintenance of the PM_{2.5} standard.

2.2 Applicability and Compliance Dates

2.2.1 Section 2.0 of this regulation applies to any industrial boiler or process heater with a maximum heat input capacity of equal to or greater than 200 million BTUs per hour (mmBTU/Hour) (except for any Fluid Catalytic Cracking Unit carbon monoxide (CO) boiler), which is operated or permitted to operate within a petroleum refinery facility on the effective date of this section. This comprises the following nine (9) units at the Delaware City refinery:

2.2.1.1 Crude Unit Vacuum Heater (Unit 21-H-2)

2.2.1.2 Crude Unit Atmospheric Heater (Unit 21-H-701)

2.2.1.3 Fluid Coking Unit Carbon Monoxide boiler (Unit 22-H-3)

2.2.1.4 Steam Methane Reformer Heater (Unit 37-H-1)

2.2.1.5 Continuous Catalyst Regenerator Reformer Heater (Unit 42-H-1,2,3)

2.2.1.6 Boiler 1 (Unit 80-1)

2.2.1.7 Boiler 2 (Unit 80-2)

2.2.1.8 Boiler 3 (Unit 80-3)

2.2.1.9 Boiler 4 (Unit 80-4)

2.2.2 The requirements of Section 2.0 of this regulation are in addition to all other state and federal requirements.

2.2.3 The following units shall be in compliance with the requirements of Section 2.0 of this regulation on and after (insert the effective date of this regulation): Crude Unit Atmospheric Heater (Unit 21-H-701), Steam Methane Reformer Heater (Unit 37-H-1) and Boiler 2 (Unit 80-2).

2.2.4 The following units shall be in compliance with the requirements of Section 2.0 of this regulation as soon as practicable, but not later than:

2.2.4.1 December 31, 2008: Boiler 1 (Unit 80-1) and Crude Unit vacuum Heater (Unit 21-H-2).

2.2.4.2 May 1, 2011: Boiler 3 (Unit 80-3) and Boiler 4 (Unit 80-4).

2.2.4.3 December 31, 2012: Continuous Catalyst Regenerator Reformer Heater (Unit 42-H-1, 2, 3).

2.3 Standards.

The owner or operator of any industrial boiler or process heater identified in Section 2.2.1 of this regulation shall not allow NO_x to be emitted at a rate that exceeds the following:

- 2.3.1** For the Fluid Coking Unit Carbon Monoxide boiler (Unit 22-H-3), Reserved.
 - 2.3.2** For the Steam Methane Reformer (SMR) Heater (Unit 37-H-1), 0.07 lb/mmBTU, on a 24-hour rolling average basis.
 - 2.3.3** Boiler 3 (Unit 80-3) and Boiler 4 (Unit 80-4) shall not operate after May 1, 2011. On or before May 1, 2011 the owner or operator of Boiler 3 and Boiler 4 shall request that any operating permit issued by the Department be cancelled.
 - 2.3.4** For any unit not covered by 2.3.1, 2.3.2, or 2.3.3, 0.04 lb/mmBTU, on a 24-hour rolling average basis,
- 2.4** Monitoring Requirements. Compliance with the NO_x emission standards specified in 2.3.1, 2.3.2, and 2.3.4 of this regulation shall be determined based on CEM data collected in accordance with the appropriate requirements set forth in 40 CFR, Part 60, Appendix B, Performance Specification 2, and the QA/QC requirements in 40 CFR Part 60, Appendix F.
- 2.5** Recordkeeping and Reporting Requirements
- 2.5.1** Not later than 180 days after the effective date of Section 2.0 of this regulation, any person subject to Section 2.0 of this regulation shall develop, and submit to the Department, a schedule for bringing the affected emission unit(s) identified in Section 2.2.4. into compliance with the requirements of Section 2.3 of this regulation. Such schedule shall include, at a minimum, all of the following:
 - 2.5.1.1** The method by which compliance will be achieved.
 - 2.5.1.2** The dates by which the affected person plans to complete the following major increments of progress, as applicable:
 - 2.5.1.2.1** Completion of engineering
 - 2.5.1.2.2** Submission of permit applications
 - 2.5.1.2.3** Awarding of contracts for construction and/or installation
 - 2.5.1.2.4** Initiation of construction
 - 2.5.1.2.5** Completion of construction

2.5.1.2.6 Commencement of trial operation

2.5.1.2.7 Initial compliance testing

2.5.1.2.8 Submission of compliance testing reports

2.5.1.2.9 Commencement of normal operations (in full compliance)

2.5.2 Any person subject to Section 2.0 of this regulation shall submit to the Department an initial compliance certification by (insert 60 days after the effective date of this regulation) for units identified in Section 2.2.3 of this regulation and, for units identified in Section 2.2.4, by the compliance date specified in Section 2.2.4. The initial compliance certification shall include, at a minimum, all of the following information:

2.5.2.1 The name and the location of the facility.

2.5.2.2 The name, address and telephone number of the person responsible for the facility.

2.5.2.3 Identification of the subject source(s).

2.5.2.4 The applicable standard.

2.5.2.5 The method of compliance.

2.5.2.6 Certification that each subject source is in compliance with the applicable standard.

2.5.3 Any person subject to Section 2.0 of this regulation shall, for each occurrence of excess emissions above the standards of Section 2.3 of this regulation, within thirty (30) calendar days of becoming aware of such occurrence, supply the Department with the following information:

2.5.3.1 The name and location of the facility.

2.5.3.2 The subject source(s) that caused the excess emissions.

2.5.3.3 The time and date of first observation of the excess emissions.

2.5.3.4 The cause and expected duration of the excess emissions.

2.5.3.5 The estimated rate of emissions (expressed in the units of the applicable emission limitation) and the operating data and calculations used in determining the magnitude of the excess emissions.

2.5.3.6 The proposed corrective actions and schedule to correct the conditions causing the excess emissions.

2.5.4 Any person subject to Section 2.0 of this regulation shall maintain all information necessary to determine and demonstrate compliance with the requirements of this section for a minimum period of five (5) years. Such information shall be immediately made available to the Department upon verbal and written request.