CHAPTER 33.1-15-06
EMISSIONS OF SULFUR COMPOUNDS RESTRICTED

Section
33.1-15-06-01 Restriction of Emissions of Sulfur Dioxide From Use of Fuel
33.1-15-06-02 Restriction of Emissions of Sulfur Oxides From Industrial Processes
33.1-15-06-03 Methods of Measurement
33.1-15-06-04 Continuous Emission Monitoring Requirements
33.1-15-06-05 Reporting and Recordkeeping Requirements

33.1-15-06-01. Restriction of emissions of sulfur dioxide from use of fuel.

1. **General provisions.**

   a. Except as provided in subdivision c, this section applies to any installation in which fuel is burned and in which the sulfur dioxide emissions are substantially due to the content of the fuel burned, and in which the fuel is burned primarily to produce heat.

   b. For purposes of this section, a fuel burning installation is any single fuel burning furnace or boiler or other unit, device, or contrivance in which fuel is burned or any grouping of two or more such furnaces or boilers or other units, devices, or contrivances on the same premises or otherwise located in close proximity to each other and under control of the same person. The capacity of such installations shall be the manufacturer's or designer's guaranteed maximum heat input rate.

   c. This chapter does not apply to installations which are subject to a sulfur dioxide emission limit under chapter 33.1-15-12.

   d. For purposes of this chapter, equipment at an oil and gas production facility, as defined in chapter 33.1-15-20, is considered industrial process equipment.

   e. This chapter does not apply to installations that burn pipeline quality natural gas or A.S.T.M. commercial propane alone or in combination with each other. Installations that burn pipeline quality natural gas or A.S.T.M. commercial propane in combination with other fuels are subject to the requirements of this chapter.

2. **Restrictions applicable to fuel burning installations.** No person shall cause or permit the emission of sulfur dioxide to the ambient air from any fuel burning installation in an amount greater than three and zero-tenths pounds of sulfur dioxide per million British thermal units [1,290 nanograms/joule] of heat input to the installation on a one-hour-block-average basis. The department may establish alternative averaging periods provided the requirements of chapter 33.1-15-02 are met. All averaging periods must begin on the hour and averaging periods greater than one hour must be rolling averages.

3. The department shall establish more restrictive emission limits for a source if it is determined that such source is causing the ambient air quality standards of chapter 33.1-15-02 or the prevention of significant deterioration increments of chapter 33.1-15-15 for sulfur dioxide to be exceeded. However, the department may consider alternative measures which will achieve compliance with the ambient air quality standards or prevention of significant deterioration increments.

History: Effective January 1, 2019.
General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-06-02. Restriction of emissions of sulfur oxides from industrial processes.

1. **General provisions.** This section applies to all emissions except those in which all of the following are met:

   a. Fuel is burned primarily to produce heat.

   b. The sulfur compound emission is due primarily to the sulfur in the fuel burned.

2. **Concentration of sulfur compounds in emissions restricted.** The department shall establish emission limitations on the amount of sulfur dioxide, sulfur trioxide, and sulfuric acid which may be emitted into the ambient air from any source specified in subsection 1 in any area, if it is determined that such source is causing the ambient air quality standards of chapter 33.1-15-02 or the prevention of significant deterioration increments of chapter 33.1-15-15 for sulfur dioxide to be exceeded.

History: Effective January 1, 2019.
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Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-06-03. Methods of measurement.

Testing must be done in accordance with the provisions of chapter 33.1-15-12, as applicable. The reference methods in appendix A to chapter 33.1-15-12, its replacement or applicable alternative methods as approved by the department, shall be used to determine compliance with this chapter as follows:

1. Method 1 for selection of sampling site and sample traverses.

2. Method 2 for stack gas velocity and volumetric flow rate.

3. Method 3 for gas analysis.

4. Method 4 for moisture content.

5. Method 6, 6A, 6C, and 20, as applicable, for concentration of sulfur dioxide. The minimum sampling time shall be at least sixty minutes per run and a test must consist of three runs.

   For each run using method 6 for fuel burning equipment the emissions expressed in pounds per million British thermal units [nanogram per joule] shall be determined by the following procedures:

$$E = CF_d \left(\frac{20.9}{20.9 - \%O_2}\right) \quad \text{or} \quad E = CF_c \left(\frac{100}{\%CO_2}\right)$$

   where:

   (1) E = pollutant emission, lb/million Btu [ng/j].

   (2) C = pollutant concentrations, lb/dscf [ng/dscm].

   (3) $\%O_2$ = oxygen content by volume, dry basis.

   (4) $\%CO_2$ = carbon dioxide content by volume, dry basis.

   The percent oxygen and percent carbon dioxide shall be determined by using the integrated sampling and analysis procedures of method 3.

(5) F_d and F_c = factors listed in method 19 of appendix A of chapter 33.1-15-12.

For facilities firing combinations of fuels the F_d or F_c factors designated in this section shall be prorated in accordance with the applicable formula as follows:

$$F_d = \sum_{i=1}^{n} x_i (F_d)_i \qquad \text{or} \qquad F_c = \sum_{i=1}^{n} x_i (F_c)_i$$

where:

x_i = the fraction of total heat input derived from each type of fuel.

$(F_d)i$ or $(F_c)_i$ = the applicable F_d or F_c factor for each fuel type.

n = the number of fuels being burned in combination.

History: Effective January 1, 2019.
General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-06-04. Continuous emission monitoring requirements.

1. **General provisions.**

   a. For sources subject to continuous emission monitoring requirements in their permit to operate, the monitoring systems must be used to demonstrate compliance with emission limits on a continuous basis after the initial compliance test and certification of the system.

   b. Emission rates must be recorded in the units of the applicable standard. Conversion of monitor data to an emission rate expressed in pounds per million British thermal units [nanogram per joule] shall be calculated in accordance with the equations in section 33.1-15-06-03. Equations for calculating emission rates with different units will be supplied by the department.

2. **Installation, operation, and certification.** The installation operation, and certification of continuous monitoring systems and monitoring devices must comply with the provisions of chapter 33.1-15-12 that apply to monitoring systems and monitoring devices.

3. **Quality assurance.** All continuous monitoring systems and monitoring devices must be recertified in accordance with the provisions of appendix B of chapter 33.1-15-12 every three years unless otherwise directed.

History: Effective January 1, 2019.
General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-06-08; S.L. 2017, ch. 199, § 21

33.1-15-06-05. Reporting and recordkeeping requirements.

1. **Excess emissions reports.** Not later than thirty days following the end of a calendar quarter, any owner or operator required to monitor emissions in accordance with section 33.1-15-06-04 shall submit a report of excess emissions to the department. The report must include the following information:

a. The magnitude of excess emissions, any conversion factor or factors used, and the date and time of commencement and completion of each time period of excess emissions.

b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired, or adjusted, such information must be stated in the report.

2. **Records.** Any owner or operator subject to continuous emission monitoring requirements shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by the department recorded in a permanent form suitable for inspection. The file must be retained for at least two years following the date of such measurements, maintenance, reports, and records.

History: Effective January 1, 2019.
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