

A. Introduction

1. The purpose of this permit to install is to authorize the installation of a new column grain dryer with associated conveying equipment. This dryer is replacing 2 existing column grain dryers that are less efficient from an air pollution control and processing standpoint.

B. Applicable Emission Limitations and/or Control Requirements

1. Emissions Unit F001 - From grain conveying operations

- i. particulate matter emissions from grain conveying operations shall not exceed 0.74 ton per year;
- ii. PM₁₀ emissions from grain conveying operations shall not exceed 0.19 ton per year;
- ii. Visible emissions of fugitive particulate matter from the grain conveying operations shall not exceed 20 percent opacity as a 3-minute average.
- iii. the permittee shall minimize and/or eliminate particulate matter emissions resulting from conveying operations through utilization of total enclosure of all equipment associated with these operations.

2. Emissions Unit F002 - natural gas-fired column grain dryer

- a. PM₁₀ emissions from column dryer operations shall not exceed 4.95 pounds per hour and 4.95 tons per year. Particulate matter emissions from column dryer operations shall not exceed 19.8 pounds per hour and 19.8 tons per year.
- b. NO_x emissions from column dryer operations shall not exceed 4.76 pounds per hour and 20.8 tons per year.
- c. CO emissions from column dryer operations shall not exceed 1.2 pounds per hour and 5.3 tons per year.
- d. SO₂ emissions from column dryer operations shall not exceed 0.02 pound per hour and 0.09 ton per year.
- e. OC emissions from column dryer operations shall

not exceed 0.2 pound per hour and 0.9 ton per year.

- f. Visible emissions of fugitive particulate matter from the column dryer shall not exceed 0 percent opacity.
- g. Fugitive particulate matter emissions from the column dryer shall be controlled by the enclosure of the dryer with perforated sheets in which the perforations do not exceed 0.078 inch.

C. Operational Restrictions

- 1. Emissions Unit F001 - From conveying operations
 - a. The maximum annual throughput for grain conveyed (associated with F002) shall not exceed 180,180 tons of grain.
- 2. Emissions Unit F002 - natural gas-fired grain dryer
 - a. The maximum annual throughput for this emissions unit shall not exceed 180,180 tons of grain.
 - b. The permittee shall be restricted to burning only natural gas in this emissions unit.

D. Monitoring and/or Recordkeeping Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings, if a strip-chart recorder is employed, for continuous monitoring instrumentation, and copies of all reports required by the permit. Such records may be maintained in computerized form.

- 1. Emissions Unit F001 - From grain conveying operations
 - a. The permittee shall maintain monthly records of the amount of grain processed through this emissions unit. In conjunction with the above, the permittee shall calculate at the end of each month, the total, year to date, amount of grain processed through this emissions unit.
- 2. Emissions Unit F002 - column grain dryer with natural gas dryer

- a. The permittee shall maintain monthly records of the amount of grain processed through this emissions unit. In conjunction with the above, the permittee shall calculate at the end of each month, the total, year to date, amount of grain processed through this emissions unit.
- b. The permittee shall maintain records of the amount of natural gas combusted in this emissions unit.

E. Reporting Requirements

1. The permittee shall submit material throughput deviation (excursion) reports for each emissions unit. The material throughput deviation (excursion) reports shall identify all periods of time during which the material throughput per emissions unit did not comply with the allowable limit specified above. If no deviations occurred during a calendar quarter, a quarterly report shall be submitted which states that no deviations occurred during that quarter. The reports shall be submitted which state that no deviations occurred during that quarter. The reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

F. Testing Requirements/Compliance Method Determinations

Testing Requirements

None required.

Compliance Method Determination

Compliance with the emissions limitations of this permit shall be determined in accordance with the following methods:

1. For grain conveying operations (emissions unit F001)

- a. Emission Limitation

0.74 ton PM/year

Applicable Compliance Method

Compliance shall be determined using calculations, based on AP-42 emission factors (0.825 pound PM/ton of grain), the maximum annual throughput of the emissions unit (180,180 tons/year), and a control efficiency of 99 percent (0.01).

- b. Emission Limitation

20 percent opacity, as a three minute average

Applicable Compliance Method

Compliance with the visible emission limitations shall be determined in accordance with Method 9 of 40 CFR Part 60, Appendix A.

2. For grain column dryer operations (Emissions Unit F002)

a. Emission Limitation

4.95 pounds PM₁₀/hour and 4.95 tons PM₁₀/year

Applicable Compliance Method

Compliance shall be determined using calculations, based on AP-42 emission factors (0.055 pound PM₁₀/ton of grain dried), the maximum hourly and annual throughput of the emission unit (180,180 tons/year).

b. Emission Limitation

19.8 pounds PM/hour and 19.8 tons PM/year

Applicable Compliance Method

Compliance shall be determined using calculations based on AP-42 emission factors (0.22 pound PM/ton of grain dried), the maximum hourly and annual throughput of the emission unit (180,180 tons/year).

c. Emission Limitation

4.76 pounds NO_x/hour and 20.8 ton NO_x/year

Applicable Compliance Method

Compliance shall be determined using calculations based on AP-42 emission factors (140 pounds NO_x/10⁶ ft³ natural gas combusted), the maximum hourly and annual amount of natural gas combusted in this emission unit (297.84 10⁶ ft³).

d. Emission Limitation

1.2 pounds CO/hour and 5.3 tons CO/year

Applicable Compliance Method

Compliance shall be determined using calculations based on AP-42 emission factors (21 pounds CO/10⁶

ft³ natural gas combusted), the maximum hourly and annual amount of natural gas combusted in this emission unit (297.84 10⁶ ft³).

e. Emission Limitation

0.02 pound SO₂/hour and 0.09 ton SO₂/year

Applicable Compliance Method

Compliance shall be determined using calculations based on AP-42 emission factors (0.6 pound SO₂/10⁶ ft³ natural gas combusted), the maximum hourly and annual amount of natural gas combusted in this emission unit (297.84 10⁶ ft³).

f. Emission Limitation

0.2 pound OC/hour and 0.9 ton OC/year

Applicable Compliance Method

Compliance shall be determined using calculations based on AP-42 emission factors (5.8 pounds OC/10⁶ ft³ natural gas combusted), the maximum hourly and annual amount of natural gas combusted in this emission unit (297.84 10⁶ ft³).

g. Emission Limitation

0 percent opacity

Applicable Compliance Method

Compliance with the visible emission limitations shall be determined in accordance with Method 9 of 40 CFR Part 60, Appendix A.