

Environmental Protection Agency

§ 98.263

process and the facility meets the requirements of either § 98.2(a)(1) or (a)(2).

§ 98.262 GHGs to report.

(a) You must report CO₂ process emissions from each wet-process phosphoric acid process line.

(b) You must report under subpart C of this part (General Stationary Fuel Combustion Sources) the emissions of CO₂, CH₄, and N₂O from each stationary combustion unit following the requirements of subpart C of this part.

§ 98.263 Calculating GHG emissions.

You must calculate and report the annual process CO₂ emissions from each wet-process phosphoric acid process line using the procedures in either paragraph (a) or (b) of this section.

(a) Calculate and report under this subpart the process CO₂ emissions by

operating and maintaining a CEMS according to the Tier 4 Calculation Methodology specified in § 98.33(a)(4) and all associated requirements for Tier 4 in subpart C of this part (General Stationary Fuel Combustion Sources).

(b) Calculate and report under this subpart the process CO₂ emissions using the procedures in paragraphs (b)(1) and (b)(2) of this section.

(1) Calculate the annual CO₂ mass emissions from each wet-process phosphoric acid process line using the methods in paragraphs (b)(1)(i) or (ii) of this section, as applicable.

(i) If your process measurement provides the inorganic carbon content of phosphate rock as an output, calculate and report the process CO₂ emissions from each wet-process phosphoric acid process line using Equation Z-1a of this section:

$$E_m = \sum_{i=1}^b \sum_{n=1}^z (IC_{n,i} * P_{n,i}) * \frac{2000}{2205} * \frac{44}{12} \quad (\text{Eq. Z-1a})$$

where:

E_m = Annual CO₂ mass emissions from a wet-process phosphoric acid process line m according to this Equation Z-1a (metric tons).

IC_{n,i} = Inorganic carbon content of a grab sample batch of phosphate rock by origin i obtained during month n, from the carbon analysis results (percent by weight, expressed as a decimal fraction).

P_{n,i} = Mass of phosphate rock by origin i consumed in month n by wet-process phosphoric acid process line m (tons).

z = Number of months during which the process line m operates.

b = Number of different types of phosphate rock in month, by origin. If the grab sample is a composite sample of rock from more than one origin, b = 1.

2000/2205 = Conversion factor to convert tons to metric tons.

44/12 = Ratio of molecular weights, CO₂ to carbon.

(ii) If your process measurement provides the CO₂ emissions directly as an output, calculate and report the process CO₂ emissions from each wet-process phosphoric acid process line using Equation Z-1b of this section:

$$E_m = \sum_{i=1}^b \sum_{n=1}^z (CO_{2n,i} * P_{n,i}) * \frac{2000}{2205} \quad (\text{Eq. Z-1b})$$

where:

E_m = Annual CO₂ mass emissions from a wet-process phosphoric acid process line m according to this Equation Z-1b (metric tons).

CO_{2n,i} = Carbon dioxide emissions of a grab sample batch of phosphate rock by origin i obtained during month n (percent by weight, expressed as a decimal fraction).