

Environmental Protection Agency

§ 98.213

limestone, dolomite, ankerite, magnesite, siderite, rhodochrosite, or sodium carbonate. Facilities are considered to emit CO₂ if they consume at least 2,000 tons per year of carbonates heated to a temperature sufficient to allow the calcination reaction to occur.

(b) This source category does not include equipment that uses carbonates or carbonate containing minerals that are consumed in the production of cement, glass, ferroalloys, iron and steel, lead, lime, phosphoric acid, pulp and paper, soda ash, sodium bicarbonate, sodium hydroxide, or zinc.

(c) This source category does not include carbonates used in sorbent technology used to control emissions from stationary fuel combustion equipment. Emissions from carbonates used in sorbent technology are reported under 40 CFR 98, subpart C (Stationary Fuel Combustion Sources).

§ 98.211 Reporting threshold.

You must report GHG emissions from miscellaneous uses of carbonate if your facility uses carbonates as defined in § 98.210 of this subpart and the facility meets the requirements of either § 98.2(a)(1) or (a)(2).

§ 98.212 GHGs to report.

You must report CO₂ process emissions from all miscellaneous carbonate use at your facility as specified in this subpart.

§ 98.213 Calculating GHG emissions.

You must determine CO₂ process emissions from carbonate use in accordance with the procedures specified in either paragraphs (a) or (b) of this section.

(a) Calculate the process emissions of CO₂ using calcination fractions with Equation U-1 of this section.

$$E_{CO_2} = \sum_{i=1}^n M_i * EF_i * F_i * \frac{2000}{2205} \quad (\text{Eq. U-1})$$

Where:

E_{CO_2} = Annual CO₂ mass emissions from consumption of carbonates (metric tons).

M_i = Annual mass of carbonate type i consumed (tons).

EF_i = Emission factor for the carbonate type i, as specified in Table U-1 to this subpart, metric tons CO₂/metric ton carbonate consumed.

F_i = Fraction calcination achieved for each particular carbonate type i (decimal frac-

tion). As an alternative to measuring the calcination fraction, a value of 1.0 can be used.

n = Number of carbonate types.

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

(b) Calculate the process emissions of CO₂ using actual mass of output carbonates with Equation U-2 of this section.

$$E_{CO_2} = \left[\sum_{k=1}^m (M_k * EF_k) - \sum_{j=1}^n (M_j * EF_j) \right] * \frac{2000}{2205} \quad (\text{Eq. U-2})$$

Where:

E_{CO_2} = Annual CO₂ mass emissions from consumption of carbonates (metric tons).

M_k = Annual mass of input carbonate type k (tons).

EF_k = Emission factor for the carbonate type k, as specified in Table U-1 of this subpart (metric tons CO₂/metric ton carbonate input).

M_j = Annual mass of output carbonate type j (tons).

EF_j = Emission factor for the output carbonate type j, as specified in Table U-1 of this subpart (metric tons CO₂/metric ton carbonate input).

m = Number of input carbonate types.

n = Number of output carbonate types.