

Subpart O—HCFC-22 Production and HFC-23 Destruction

§ 98.150 Definition of the source category.

The HCFC-22 production and HFC-23 destruction source category consists of HCFC-22 production processes and HFC-23 destruction processes.

(a) An HCFC-22 production process produces HCFC-22 (chlorodifluoromethane, or CHClF_2) from chloroform (CHCl_3) and hydrogen fluoride (HF).

(b) An HFC-23 destruction process is any process in which HFC-23 undergoes destruction. An HFC-23 destruction process may or may not be co-located with an HCFC-22 production process at the same facility.

§ 98.151 Reporting threshold.

You must report GHG emissions under this subpart if your facility contains an HCFC-22 production or HFC-23 destruction process and the facility meets the requirements of either § 98.2(a)(1) or (a)(2).

§ 98.152 GHGs to report.

(a) You must report under subpart C of this part (General Stationary Fuel Combustion Sources) the emissions of CO_2 , CH_4 , and N_2O from each stationary combustion unit following the requirements of subpart C.

(b) You must report HFC-23 emissions from HCFC-22 production processes and HFC-23 destruction processes.

§ 98.153 Calculating GHG emissions.

(a) The mass of HFC-23 generated from each HCFC-22 production process shall be estimated by using one of two methods, as applicable:

(1) Where the mass flow of the combined stream of HFC-23 and another reaction product (e.g., HCl) is measured, multiply the weekly (or more frequent) HFC-23 concentration measurement (which may be the average of more frequent concentration measurements) by the weekly (or more frequent) mass flow of the combined stream of HFC-23 and the other product. To estimate annual HFC-23 production, sum the weekly (or more frequent) estimates of the quantities of HFC-23 produced over the

year. This calculation is summarized in Equation O-1 of this section:

$$G_{23} = \sum_{p=1}^n c_{23} * F_p * 10^{-3} \quad (\text{Eq. O-1})$$

Where:

- G_{23} = Mass of HFC-23 generated annually (metric tons).
- c_{23} = Fraction HFC-23 by weight in HFC-23/other product stream.
- F_p = Mass flow of HFC-23/other product stream during the period p (kg).
- p = Period over which mass flows and concentrations are measured.
- n = Number of concentration and flow measurement periods for the year.
- 10^{-3} = Conversion factor from kilograms to metric tons.

(2) Where the mass of only a reaction product other than HFC-23 (either HCFC-22 or HCl) is measured, multiply the ratio of the weekly (or more frequent) measurement of the HFC-23 concentration and the weekly (or more frequent) measurement of the other product concentration by the weekly (or more frequent) mass produced of the other product. To estimate annual HFC-23 production, sum the weekly (or more frequent) estimates of the quantities of HFC-23 produced over the year. This calculation is summarized in Equation O-2 of this section, assuming that the other product is HCFC-22. If the other product is HCl, HCl may be substituted for HCFC-22 in Equations O-2 and O-3 of this section.

$$G_{23} = \sum_{p=1}^n \left(\frac{c_{23}}{c_{22}} \right) * P_{22} * 10^{-3} \quad (\text{Eq. O-2})$$

Where:

- G_{23} = Mass of HFC-23 generated annually (metric tons).
- c_{23} = Fraction HFC-23 by weight in HCFC-22/HFC-23 stream.
- c_{22} = Fraction HCFC-22 by weight in HCFC-22/HFC-23 stream.
- P_{22} = Mass of HCFC-22 produced over the period p (kg), calculated using Equation O-3 of this section.
- p = Period over which masses and concentrations are measured.
- n = Number of concentration and mass measurement periods for the year.
- 10^{-3} = Conversion factor from kilograms to metric tons.