

Environmental Protection Agency

§ 98.343

§ 98.341 Reporting threshold.

You must report GHG emissions under this subpart if your facility contains a MSW landfill and the facility meets the requirements of § 98.2(a)(1).

§ 98.342 GHGs to report.

(a) You must report CH₄ generation and CH₄ emissions from landfills.

(b) You must report CH₄ destruction resulting from landfill gas collection and combustion systems.

(c) 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.

§ 98.343 Calculating GHG emissions.

(a) For all landfills subject to the reporting requirements of this subpart, calculate annual modeled CH₄ generation according to the applicable requirements in paragraphs (a)(1) through (a)(3) of this section.

(1) Calculate annual modeled CH₄ generation using Equation HH-1 of this section.

$$G_{CH_4} = \sum_{x=S}^{T-1} \left\{ W_x \times MCF \times DOC \times DOC_F \times F \times \frac{16}{12} \times \left(e^{-k(T-x-1)} - e^{-k(T-x)} \right) \right\} \quad (\text{Eq. HH-1})$$

Where:

G_{CH₄} = Modeled methane generation rate in reporting year T (metric tons CH₄).

x = Year in which waste was disposed.

S = Start year of calculation. Use the year 1960 or the opening year of the landfill, whichever is more recent.

T = Reporting year for which emissions are calculated.

W_x = Quantity of waste disposed in the landfill in year x from measurement data, tipping fee receipts, or other company records (metric tons, as received (wet weight)).

MCF = Methane correction factor (fraction). Use the default value of 1 unless there is active aeration of waste within the landfill during the reporting year. If there is active aeration of waste within the landfill during the reporting year, use either the default value of 1 or select an alternative value no less than 0.5 based on site-specific aeration parameters.

DOC = Degradable organic carbon from Table HH-1 of this subpart [fraction (metric tons C/metric ton waste)].

DOC_F = Fraction of DOC dissimilated (fraction). Use the default value of 0.5.

F = Fraction by volume of CH₄ in landfill gas from measurement data for the current reporting year, if available (fraction, dry basis, corrected to 0% oxygen); otherwise, use the default of 0.5.

k = Rate constant from Table HH-1 to this subpart (yr⁻¹). Select the most applicable k value for the majority of the past 10 years (or operating life, whichever is shorter).

(2) For years when material-specific waste quantity data are available,

apply Equation HH-1 of this section for each waste quantity type and sum the CH₄ generation rates for all waste types to calculate the total modeled CH₄ generation rate for the landfill. Use the appropriate parameter values for k, DOC, MCF, DOC_F, and F shown in Table HH-1 of this subpart. The annual quantity of each type of waste disposed must be calculated as the sum of the daily quantities of waste (of that type) disposed. You may use the bulk waste parameters for a portion of your waste materials when using the material-specific modeling approach for mixed waste streams that cannot be designated to a specific material type. For years when waste composition data are not available, use the bulk waste parameter values for k and DOC in Table HH-1 to this subpart for the total quantity of waste disposed in those years.

(3) Beginning in the first emissions reporting year and for each year thereafter, if scales are in place, you must determine the annual quantity of waste (in metric tons as received, i.e., wet weight) disposed of in the landfill using paragraph (a)(3)(i) of this section for all containers and for all vehicles used to haul waste to the landfill, except for passenger cars, light duty pickup trucks, or waste loads that cannot be measured using the scales due to physical limitations (load cannot physically access or fit on the scale) and/or