40 C.F.R. § 60.754

Test methods and procedures.

(a)

(1) The landfill owner or operator shall calculate the NMOC emission rate using either the equation provided in paragraph (a)(1)(i) of this section or the equation provided in paragraph (a)(1)(ii) of this section. Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in paragraph (a)(1)(i), for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in paragraph (a)(1)(ii), for part of the life of the landfill. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_O, and 4,000 parts per million by volume as hexane for the C_{NMOC}. For landfills located in geographical areas with a thirty year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year.

(i) The following equation shall be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{NMOC} = \sum_{i=1}^{n} 2\,k\,L_o\,M_i\left(e^{-kt_i}\right)\left(C_{NMOC}\right)\left(3.6 \times 10^{-9}\right)$$

where,

M_{NMOC} = Total NMOC emission rate from the landfill, megagrams per year k = methane generation rate constant, year^{-1} L_O = methane generation potential, cubic meters per megagram solid waste M_i = mass of solid waste in the ith section, megagrams t_i = age of the ith section, years C_{NMOC} = concentration of NMOC, parts per million by volume as hexane 3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if documentation of the nature and amount of such wastes is maintained

(ii) The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown.

$M_{NMOC} = 2L_O\,R\,(e^{-kc} - e^{-kt})\,C_{NMOC}\,(3.6 \times 10^{-9})$

Where:

M_{NMOC} = mass emission rate of NMOC, megagrams per year L_O = methane generation potential, cubic meters per megagram solid waste R = average annual acceptance rate, megagrams per year k = methane generation rate constant, year^{-1} t = age of landfill, years C_{NMOC} = concentration of NMOC, parts per million by volume as hexane c = time since closure, years; for active landfill c = O and e^{-kc} 1 3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value of R, if documentation of the nature and amount of such wastes is maintained.

(2) *Tier 1.* The owner or operator shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.