

$$CH_4 = \left[V_G \times MF_{CH_4} \times (1 - eff_t) \right] \times \left[\frac{T_{sc} \times P_t}{T_t \times P_{sc}} \right] \times \rho_{CH_4} \times 0.001$$

Where:

CH_4 = Annual CH_4 emissions attributable to flares, in metric tons;

V_G = Annual volume of gas directed to flares, determined in accordance with QC.29.4.4, in cubic metres;

MF_{CH_4} = Mole fraction of CH_4 in the gas directed to flares, determined in accordance with QC.29.4.4;

eff_t = Flare combustion efficiency from manufacturer or a default value of 0.98;

T_{sc} = Temperature at standard conditions of 293.15 K;

T_t = Temperature during flaring, in kelvin;

P_t = Pressure during flaring, in kilopascals;

P_{sc} = Pressure at standard conditions of 101.325 kPa;

ρ_{CH_4} = Density of CH_4 that is 0.668 kg per cubic metre at standard conditions;

0.001 = Conversion factor, kilograms to metric tons;