

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

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;

$\rho_{CH_4}$  = Density of  $CH_4$  of 0.690 kg per cubic metre at standard conditions;

0.001 = Conversion factor, kilograms to metric tons;