

$$CH_4 = \left[ V_G \times MF_{CH_4} \times (1 - eff_f) \right] \times \left[ \frac{T_{SC} \times P_f}{T_f \times P_{SC}} \right] \times \rho_{CH_4} \times 0.001$$

Where:

$CH_4$  = Annual  $CH_4$  emissions attributable to flaring, in metric tons;

$V_G$  = Annual volume of gas flared, determined in accordance with QC.33.4.13, in cubic metres;

$MF_{CH_4}$  = Mole fraction of  $CH_4$  in the gas flared, determined in accordance with paragraph 3 of QC.33.4;

$eff_f$  = Flare combustion efficiency determined by the manufacturer, or a default value of 0.98;

$T_{SC}$  = Temperature at standard conditions of 293.15 kelvin;

$T_f$  = Flare combustion temperature, in kelvin;

$P_f$  = Flare combustion pressure, in kilopascals;

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

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

0.001 = Conversion factor, kilograms to metric tons;