$$GHG_i = \sum_{j=1}^{n}\left[\sum_{m=1}^{z}\left(F_{G,j} \times t_j\right) \times \left(1 - FG_j\right)\right] \times MF_i \times \left[\frac{T_{SC} \times P_{ca}}{T_{ca} \times P_{SC}}\right]_j \times \rho_i \times 0.001$$

Where:

GHG_i = Annual emissions of greenhouse gas *i* attributable to reciprocating compressor vents, in metric tons;
n = Total number of reciprocating compressors;
j = Reciprocating compressor;
z = Number of operating modes of reciprocating compressor *j*;
m = Operating mode of reciprocating compressor *j*;
$F_{G,j}$ = Gas flow from the venting of reciprocating compressor *j*, in operating mode *m*, determined in accordance with QC.29.4.6, in cubic metres per hour;
t_j = Annual operating time of reciprocating compressor *j*, in operating mode *m*, in hours;
FG_j = Quantity of gas from the vent of reciprocating compressor *j* that is recovered using a vapour recovery system, determined in accordance with paragraph 4 of QC.29.4.5, expressed as a percentage;
MF_i = Molar fraction of greenhouse gas *i* in gas from reciprocating compressor vents, determined in accordance with paragraph 3 of QC.29.4;
T_{SC} = Temperature at standard conditions of 293.15 kelvin;
T_{ca} = Atmosheric temperature at the reciprocating compressor vent, in kelvin;
P_{ca} = Atmosheric pressure at the reciprocating compressor vent, in kilopascals;
P_{SC} = Pressure at standard conditions of 101.325 kPa;
p_i = Density of greenhouse gas *i* that is 1.830 kg per cubic metre for CO_2 and 0.668 kg per cubic metre for CH_4 at standard conditions;
0.001 = Conversion factor, kilograms to metric tons;
i = CO_2 or CH_4.