$$GHG_i = \left(\frac{H \times D^2 \times \pi \times P_{atm} \times G \times 365}{4 \times P \times t} \right) \times \left[\frac{T_{SC} \times P_d}{T_d \times P_{SC}} \right] \times MF_i \times \rho_i \times 0.001$$

Where:

GHG_i = Annual emissions of greenhouse gas *i* attributable to dehydrator vents, in metric tons;
H = Height of the dehydrator vessel, in metres;
D = Inside diameter of the dehydrator vessel, in metres;
π = Pi, namely 3.1416;
P = Natural gas pressure, in kilopascals;
P_{atm} = Atmospheric pressure, in kilopascals;
G = Fraction of packed vessel volume that is natural gas;
t = Time between refilling, in days;
365 = Number of days in the year;
T_{SC} = Temperature at standard conditions of 293.15 kelvin;
T_d = Temperature at dehydrator vent, in kelvin;
P_d= Pressure at dehydrator vent, in kilopascals;
P_{SC} = Pressure at standard conditions of 101.325 kPa;
MF_i = Molar fraction of greenhouse gas *i* in natural gas, determined in accordance with paragraph 3 of QC.33.4;
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;