

$$GHG_{n-m,i} = \sum_{k=1}^m [Q_{NG,k} \times V_k] \times MF_i \times \rho_i \times 0.001$$

Where:

$GHG_{n-m,i}$ = Annual emissions of greenhouse gas i attributable to natural gas driven pneumatic pump venting, in metric tons;

m = Total number of natural gas driven pneumatic pumps;

k = Natural gas driven pneumatic pump;

$Q_{NG,k}$ = Quantity of natural gas consumed by the natural gas driven pneumatic pump k , determined in accordance with paragraph 3 of QC.33.4.1, in cubic metres per litre of liquid pumped at standard conditions;

V_k = Annual volume of liquid pumped, in litres;

MF_i = Molar fraction of greenhouse gas i in natural gas, determined in accordance with paragraph 3 of QC.33.4;

ρ_i = Density of greenhouse gas i that is 1.893 kg per cubic metre for CO_2 and 0.690 kg per cubic metre for CH_4 at standard conditions;

0.001 = Conversion factor, kilograms to metric tons;

i = CO_2 or CH_4 .