

## Run Data Calculations

COMPANY : Black Gold Energy Ltd	LOCATION: 02-27-08-28 W1
DAILY OIL PROD.: 3.0 m3	GOR: 3.0 m3/m3
TREATER PRESS(kPa): N/A	H <sub>2</sub> S MOLE FRAC.: 0.003(100 fold)
TANK GOR: 3.0 m3/m3	
SOURCE TYPE	Point
EMISSION RATE (G/S)	0.000450441
STACK HEIGHT (M)	6.0m
STK INSIDE DIAM (M)	0.0762m
STK EXIT VELOCITY (M/S)	0.22841581
STK GAS EXIT TEMP (K)	293.0000
AMBIENT AIR TEMP (K)	293.0000
RECEPTOR HEIGHT (M)	0000
URBAN/RURAL OPTION	RURAL
BUILDING HEIGHT (M).	0000
MIN HORIZ BLDG DIM (M).	0000
MAX HORIZ BLDG DIM (M)	0000

$$\text{STACK EXIT FLOW RATE m}^3/\text{s} = \frac{(\text{m}^3 \text{ oil/d}) \times (\text{tank GOR}) \times (\text{H}_2\text{S mole fraction})}{\text{sec/day}}$$

$$\begin{aligned} \text{EMISSION RATE g/s H}_2\text{S} &= \text{Flow Rate} \times 1441.41 \text{ (constant for H}_2\text{S)} \\ \text{SO}_2 &= \text{Flow Rate} \times 2709.47 \text{ (constant for SO}_2\text{)} \end{aligned}$$

$$\text{STACK EXIT VELOCITY m/s} = \frac{(\text{vent gas vol. m}^3/\text{d}) \times (\text{stack height})}{\text{Stack volume}} \times \left( \frac{1}{\text{sec/day}} \right)$$