

Facility : 1009

Date : 4/29/2018

Enter data in shaded fields to calculate gas volumes released due to leak and blowdown of system.

Circular Hole

Hours of leak	
Diameter of hole (inches)	
Upstream Pressure	
Volume of Gas Leaked	0.00

Crack

Hours of leak	1
Length of Crack (inches)	5
Width of Crack (inches)	1
Upstream Pressure	365
Volume of Gas Leaked	2417

Calculations:

Volume of Gas Leaked (MSCF) = Diameter*Diameter*(Upstream Gauge Pressure + Atmospheric Pressure)*Hours of Leak

****Reference: Pipeline Rules of Thumb Handbook, 3rd Edition, McAllister. Page 260. Assuming Standard Temperature and Pressure (14.7 psi and 60 F)**

Footage of Pipe blowdown	27984	
Initial line pressure	280	
Diameter of Pipe (inches)	12	
Volume of Gas Blown Down	511	0.00000

Calculations:

Volume of Gas Blown Down (MSCF) = Volume at pipeline conditions (ft3)*(Gauge Pressure (psig)+Atmospheric Pressure 13.7 psi)*Standard Temperature (60F)
/(1000 scf/mscf)*Standard Pressure (14.7psi)*Temperature(F)*Z Factor

Volume at pipeline conditions (scf) = Diameter/12 (ft)*Diameter/12 (ft)*PI/4*Length of pipe (ft)

****Reference: Gas Pipeline Hydraulics, Menon (2005) Pages 132-134. Assuming the Ideal Gas Law and Tpipeline = Tatm.**

Total Gas Loss	2928 MSCF	2.93 MMSCF
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Comments:

Name:

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Title :

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