Facility :   1009   **Date :**   9/16/2019

Circular Hole

Hours of leak	0.25
Diameter of hole (inches)	0.0625
Upstream Pressure	545
Volume of Gas Leaked	**0.55**

Crack

Hours of leak	
Length of Crack (inches)	
Width of Crack (inches)	
Upstream Pressure	
Volume of Gas Leaked	**0.00**

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 blowndown	42280	
Initial line pressure	545	
Diameter of Pipe (inches)	12	
Volume of Gas Blown Down	**1464.91804**	**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, Menson (2005) Pages 132-134. Assuming the Ideal Gas Law and Tpipeline = Tatm.

Total Gas Loss	**1465.46 MSCF**	**1.47 MMSCF**

Comments:

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