Facility : 1009   **Date :** 7/22/2019

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

Hours of leak	1
Diameter of hole (inches)	0.015625
Line Pressure at Leak	437
Volume of Gas Leaked	**0.11**

Hourly Basis

0.11 MSCF

NOTE: Enter Components on the Gas Leak or Gas Blowdown sheet as needed.

Rectangle or Line Crack

Length, in.	0
Width, in,	0
Eqv. Diameter, in.	#DIV/0!

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	500
Diameter of Pipe (inches)	12
Volume of Gas Blown Down	**1347.13832**

MSCF

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	**1347.25 MSCF**	**1.35 MMSCF**

Cause/ Reason: Unknown

Corrective Action: Isolated and blew down

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