Facility : C-1 **Date :** 11/9/2019

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

Hours of leak	0.25
Diameter of hole (inches)	0.125
Line Pressure at Leak	644
Volume of Gas Leaked	**1.29**

Hourly Basis

1.29 MSCF

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

Rectangle or Line Crack

Length, in.	
Width, in,	
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	14097
Initial line pressure	644
Diameter of Pipe (inches)	8
Volume of Gas Blown Down	**127.7**

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	**129.0 MSCF**	**0.129 MMSCF**

Cause/ Reason: internal corrosion 1/16" pin holes

Corrective Action: clamped

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