

**\*\*\*\*\* LIQUID SPILLS - VOLUME CALCULATIONS \*\*\*\*\***

Location of spill: COG - SRO State Com #064H

Date of Spill: 1-Apr-2019

If the leak/spill is associated with production equipment, i.e. - wellhead, stuffing box, flowline, tank battery, production vessel, transfer pump, or storage tank place an "X" here: ☒

**Input Data:**

If spill volumes from measurement, i.e. metering, tank volumes, etc. are known enter the volumes here: OIL: 0.0 BBL WATER: 0.0 BBL

If "known" spill volumes are given, input data for the following "Area Calculations" is optional. The above will override the calculated volumes.

Total Area Calculations							Standing Liquid Calculations								
Total Surface Area		width		length		wet soil depth	oil (%)	Standing Liquid Area		width		length		liquid depth	oil (%)
Rectangle Area #1	80 ft	X	20 ft	X	1.50 in	0%		Rectangle Area #1	0 ft	X	0 ft	X	0.00 in	0%	
Rectangle Area #2	0 ft	X	0 ft	X	0.00 in	0%		Rectangle Area #2	0 ft	X	0 ft	X	0 in	0%	
Rectangle Area #3	0 ft	X	0 ft	X	0.0 in	0%		Rectangle Area #3	0 ft	X	0 ft	X	0 in	0%	
Rectangle Area #4	0 ft	X	0 ft	X	0.0 in	0%		Rectangle Area #4	0 ft	X	0 ft	X	0 in	0%	
Rectangle Area #5	0 ft	X	0 ft	X	0.0 in	0%		Rectangle Area #5	0 ft	X	0 ft	X	0 in	0%	
Rectangle Area #6	0 ft	X	0 ft	X	0 in	0%		Rectangle Area #6	0 ft	X	0 ft	X	0 in	0%	
Rectangle Area #7	0 ft	X	0 ft	X	0 in	0%		Rectangle Area #7	0 ft	X	0 ft	X	0 in	0%	
Rectangle Area #8	0 ft	X	0 ft	X	0 in	0%		Rectangle Area #8	0 ft	X	0 ft	X	0 in	0%	

**0.1**

**production system leak - DAILY PRODUCTION DATA REQUIRED**

Average Daily Production: Oil 0 BBL Water 0 BBL 0 Gas (MCFD)

Total Hydrocarbon Content in gas: 0% (percentage)

Did leak occur before the separator?: ☒ YES ☒ N/A (place an "X")

H2S Content in Produced Gas: 0 PPM

H2S Content in Tank Vapors: 0 PPM

Amount of Free Liquid Recovered: 0.14 BBL okay

Percentage of Oil in Free Liquid Recovered: 33% (percentage)

Liquid holding factor \*: 0.14 gal per gal

Use the following when the spill wets the grains of the soil.

\* Sand = **0.08** gallon (gal.) liquid per gal. volume of soil.  
 \* Gravelly (caliche) loam = **0.14** gal. liquid per gal. volume of soil.  
 \* Sandy clay loam soil = **0.14** gal liquid per gal. volume of soil.  
 \* Clay loam = **0.16** gal. liquid per gal. volume of soil.

Use the following when the liquid completely fills the pore space of the soil:

Occurs when the spill soaked soil is contained by barriers, natural (or not).  
 \* Clay loam = **0.20** gal. liquid per gal. volume of soil.  
 \* Gravelly (caliche) loam = **0.25** gal. liquid per gal. volume of soil.  
 \* Sandy loam = **0.5** gal. liquid per gal. volume of soil.

Total Solid/Liquid Volume: 1,600 sq. ft. 200 cu. ft. cu. ft. Total Free Liquid Volume: sq. ft. cu. ft. cu. ft.

**Estimated Volumes Spilled**

Liquid in Soil: 5.0 BBL 0.0 BBL  
 Free Liquid: 0.0 BBL 0.0 BBL  
 Totals: 5.0 BBL 0.0 BBL

Total Liquid Spill Liquid: 5.0 BBL 0.00 BBL

**Recovered Volumes**

Estimated oil recovered: BBL check - okay  
 Estimated water recovered: BBL check - okay

**Estimated Production Volumes Lost**

Estimated Production Spilled: 0.0 BBL 0.0 BBL

**Estimated Surface Damage**

Surface Area: 1,600 sq. ft.  
 Surface Area: .0367 acre

**Estimated Weights, and Volumes**

Saturated Soil = 22,400 lbs 200 cu. ft. 7 cu. yds.  
 Total Liquid = 5 BBL 209 gallon 1,743 lbs

**Air Emission from flowline leaks:**

Volume of oil spill: - BBL  
 Separator gas calculated: - MCF  
 Separator gas released: - MCF  
 Gas released from oil: - lb  
 H2S released: - lb  
 Total HC gas released: - lb  
 Total HC gas released: - MCF

**Air Emission of Reporting Requirements:**

HC gas release reportable? NO New Mexico Texas  
 H2S release reportable? NO NO NO