

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

Location of spill: Cedar Canyon 23 Fed Com 33H

Date of Spill: 5/9/2019

Site Soil Type: Caliche

Average Daily Production: BBL Oil BBL Water

Total Area Calculations						
Total Surface Area	width		length		wet soil depth	oil (%)
Rectangle Area #1	5 ft	X	4,200 ft	X	2 in	25%
Rectangle Area #2	0 ft	X	0 ft	X	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 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 #7	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #8	0 ft	X	0 ft	X	0 in	0%

Porosity 0.16 gal per gal

Saturated Soil Volume Calculations:

		<u>H2O</u>	<u>OIL</u>	
Area #1	21000 sq. ft.	2,625 cu. ft.	875 cu. ft.	
Area #2	0 sq. ft.	cu. ft.	cu. ft.	
Area #3	0 sq. ft.	cu. ft.	cu. ft.	
Area #4	0 sq. ft.	cu. ft.	cu. ft.	
Area #5	0 sq. ft.	cu. ft.	cu. ft.	
Area #6	0 sq. ft.	cu. ft.	cu. ft.	
Area #7	0 sq. ft.	cu. ft.	cu. ft.	
Area #8	0 sq. ft.	cu. ft.	cu. ft.	
Total Solid/Liquid Volume:	21,000 sq. ft.	2,625 cu. ft.	875 cu. ft.	

Estimated Volumes Spilled

	<u>H2O</u>	<u>OIL</u>	
Liquid in Soil:	74.8 BBL	24.9 BBL	
Liquid Recovered :	0.0 BBL	0.0 BBL	
Spill Liquid	74.8 BBL	24.9 BBL	
Total Spill Liquid:	99.7		

Recovered Volumes

Estimated oil recovered: **0.0 BBL**
 Estimated water recovered: **0.0 BBL**

<u>Soil Type</u>	<u>Porosity</u>
Clay	0.15
Peat	0.40
Glacial Sediments	0.13
Sandy Clay	0.12
Silt	0.16
Loess	0.25
Fine Sand	0.16
Medium Sand	0.25
Coarse Sand	0.26
Gravelly Sand	0.26
Fine Gravel	0.26
Medium Gravel	0.25
Coarse Gravel	0.18
Sandstone	0.25
Siltstone	0.18
Shale	0.05
Limestone	0.13
Basalt	0.19
Volcanic Tuff	0.20
Standing Liquids	