

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

Location of spill: Oxy Salt Ridge CC 20 17 Federal Com 0023H

Date of Spill: 11/22/2018

Site Soil Type: Caliche (Silt)

Average Daily Production: NA BBL Oil BBL Water

Total Area Calculations						
Total Surface Area	width		length		wet soil depth	oil (%)
Rectangle Area #1	285 ft	X	181 ft	X	0 in	36%
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	51585 sq. ft.	344 cu. ft.	193 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:	51,585 sq. ft.	344 cu. ft.	193 cu. ft.

Estimated Volumes Spilled

	<u>H2O</u>	<u>OIL</u>
Liquid in Soil:	9.8 BBL	5.5 BBL
Liquid Recovered :	30.0 BBL	10.0 BBL
Spill Liquid	39.8 BBL	15.5 BBL
Total Spill Liquid:	55.3	

Recovered Volumes

Estimated oil recovered: **10.0 BBL**
 Estimated water recovered: **30.0 BBL**

Soil Type	Porosity
Clay	0.15
Peat	0.40
Glacial Sedimen	0.13
Sandy Clay	0.12
Silt	0.16
Loess	0.25
Fine Sand	0.16
Medium Sand	0.25
Coarse Sand	0.26
Gravely 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	