

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

Location of spill: OXY SHU #213

Date of Spill: 3/5/2019

Site Soil Type: Caliche (silt)

Average Daily Production: BBL Oil BBL Water

Total Area Calculations						
Total Surface Area	width		length		wet soil depth	oil (%)
Rectangle Area #1	25 ft	X	95 ft	X	1 in	0%
Rectangle Area #2	6 ft	X	200 ft	X	1 in	0%
Rectangle Area #3	3 ft	X	310 ft	X	1 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	2375 sq. ft.	99 cu. ft.	cu. ft.
Area #2	1200 sq. ft.	50 cu. ft.	cu. ft.
Area #3	930 sq. ft.	39 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:	4,505 sq. ft.	188 cu. ft.	cu. ft.

Estimated Volumes Spilled

	<u>H2O</u>	<u>OIL</u>
Liquid in Soil:	5.3 BBL	0.0 BBL
Liquid Recovered :	15.0 BBL	0.0 BBL
Spill Liquid	20.3 BBL	0.0 BBL
Total Spill Liquid:	20.3	

Recovered Volumes

Estimated oil recovered: **0.0 BBL**
 Estimated water recovered: **15.0 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	