

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

Location of spill: Cedar Canyon 15-1 SWD Facility

Date of Spill: 12/11/2018

Site Soil Type: Caliche (Silt)

Average Daily Production: NA BBL Oil NA BBL Water

Total Area Calculations						
Total Surface Area	width		length		wet soil depth	oil (%)
Rectangle Area #1	30 ft	X	30 ft	X	1 in	0%
Rectangle Area #2	130 ft	X	10 ft	X	1 in	0%
Rectangle Area #3	30 ft	X	10 ft	X	1 in	0%
Rectangle Area #4	20 ft	X	20 ft	X	1 in	0%
Rectangle Area #5	5 ft	X	3 ft	X	1 in	0%
Rectangle Area #6	50 ft	X	40 ft	X	1 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	900 sq. ft.	75 cu. ft.	cu. ft.
Area #2	1300 sq. ft.	54 cu. ft.	cu. ft.
Area #3	300 sq. ft.	25 cu. ft.	cu. ft.
Area #4	400 sq. ft.	33 cu. ft.	cu. ft.
Area #5	15 sq. ft.	1 cu. ft.	cu. ft.
Area #6	2000 sq. ft.	167 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:	4,915 sq. ft.	355 cu. ft.	cu. ft.

Estimated Volumes Spilled

	<u>H2O</u>	<u>OIL</u>
Liquid in Soil:	10.1 BBL	0.0 BBL
Liquid Recovered :	0.0 BBL	0.0 BBL
Spill Liquid	10.1 BBL	0.0 BBL
Total Spill Liquid:	10.1	

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	