

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

Location of spill: Vortec 27 1 Central Tank Battery

Date of Spill: 10/25/2019

Site Soil Type: Fine Sand

Average Daily Production: BBL Oil BBL Water

Total Area Calculations						
Total Surface Area	width		length		wet soil depth	oil (%)
Rectangle Area #1	104 ft	X	390 ft	X	2 in	3%
Rectangle Area #2	23 ft	X	50 ft	X	1 in	2%
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:

		H2O	OIL
Area #1	40560 sq. ft.	6,591 cu. ft.	169 cu. ft.
Area #2	1150 sq. ft.	94 cu. ft.	2 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:	41,710 sq. ft.	6,685 cu. ft.	171 cu. ft.

Estimated Volumes Spilled

	H2O	OIL
Liquid in Soil:	190.5 BBL	4.9 BBL
Liquid Recovered :	950.0 BBL	0.0 BBL
Spill Liquid	1140.5 BBL	4.9 BBL
Total Spill Liquid:	1145.4	

Recovered Volumes

Estimated oil recovered: 0.0 BBL
 Estimated water recovered: 950.0 BBL

Soil Type	Porosity
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	

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