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

Location of spill: NHU Satellite 32 WC

Date of Spill: 4/1/2019

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	112 ft	X	160 ft	X	2 in	27%
Rectangle Area #2	135 ft	X	77 ft	X	1 in	27%
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	17920 sq. ft.	2,180 cu. ft.	806 cu. ft.
Area #2	10395 sq. ft.	632 cu. ft.	234 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:	**28,315 sq. ft.**	**2,813 cu. ft.**	**1,040 cu. ft.**

Estimated Volumes Spilled

	H2O	OIL
Liquid in Soil:	80.1 BBL	29.6 BBL
Liquid Recovered :	520.0 BBL	10.0 BBL
Spill Liquid	**600.1 BBL**	**39.6 BBL**
Total Spill Liquid:	**639.8**	

Recovered Volumes

Estimated oil recovered: 10.0 **BBL**

Estimated water recovered: 520.0 **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
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	