Bioremediation of Commercial Subdivision Soil

A soil investigation of a 100 acre site for a commercial subdivision revealed a small area of the site was contaminated. Approximately 100 cubic yards of silty clay soil contained low concentrations of 1,1,2,2-Tetrachloroethylene and Di-n-butylphthalate.

A 40x40x2.5 foot Modutank™ was brought in and erected at the site. The tank site was prepared so the tank would be set on a slight angle to assist in drainage. A drainage pipe was placed along the low side of the tank to collect excess water if needed. Once the tank was ready, the contaminated soil was excavated and placed into the tank to a depth of 1.5 feet. The soil was thoroughly soaked with water. The soil was then inoculated with M1000H* microbes at a concentration of 2500 ppm. No nutrients were added to the soil. The inoculation was accomplished by using soil probes to inject the M1000H* microbes. When completed, the soil was covered with black plastic sheeting. The whole process, including erecting the tank, excavating the soil, and inoculation was performed in one week.

Results are noted in the table below. No aeration or mixing of the soil was necessary during the treatment process, and no additional water was needed during the treatment.

Contaminant	Before Treatment	30 Days after Treatment
1,1,2,2-Tetrachloroethylene	2.5 ppb	Non-detect
Di-n-butylphthalate	750 ppb	Non-detect