PROJECT SUMMARY

Saticoy Wastewater Treatment Plant
Saticoy Sanitary District
Ventura, California

Project Overview:

The Saticoy Sanitary District (Saticoy) owns the Saticoy wastewater treatment plant (WWTP). Saticoy contracts with Ventura Regional Sanitation District (VRSD) for engineering and operations expertise. The WWTP collects and treats the sanitary waste of approximately 400 residences, and 600 customers. Originally designed in 1955 as a simple septic tank, it was improved to secondary plus nutrient removal treatment in 2003. Plans for solids handling changed in the middle of construction. Mark Capron, Senior Engineer of VRSD, converted the existing septic tank to an Ennix (aerobic substitute) digester which achieves 40% solids reduction. The solids still needed to be transported or stored. The original plan was to send it to holding ponds and then truck to a larger treatment facility to press the solids for land filling.

Santicoy Facility showing large septic tank now operating as aerobic digester prior to going to Geotubes® seen in background.

Two large circular tanks operated in batch mode provide alternating aerobic, anoxic, and clarification treatment of the wastewater.

The Challenge:

Reduce the cost of trucking low solids waste to a second facility to be reprocessed, thickened, and then hauled away to landfill. Contain and reduce odors. The open ponds on site are for percolation of the treated wastewater. Placing sludge in them for reprocessing would cause odor and pollution of the groundwater. Mark Capron, VRSD Senior Engineer, needed to find an environmentally friendly, low cost system, providing solids containment and dewatering with no discernable odor typically relating to municipal waste.

45 ft C x 43 ft L Geotube® is laying on a MCF-1210 ground cover which captures the clear filtrate to flow back to the headworks.

Raudel Juarez insures the polymer system is ready when sludge is transfered to the Geotube®

The Solution:

In early 2003 Mark investigated Geotube® technology as a solution to his problem. The Geotubes® provided the solution. They installed two 45 ft C x 43 ft L Geotubes® at the site to accept solids. A small amount of polymer is added to enhance solids concentration and lower solids in filtrate. There are no odors from the Ennix treated solids inside the geotubes. By using Geotubes® VRSD has a low cost method of containing and thickening solids, odor is not an issue, and when the time comes to remove the solids, they are at a solids concentration that is high enough to go directly to disposal.

Raudel Juarez and Kelly Polk, district manager, stand in front of a Dewatered Geotube® that was eventually filled to a height of 5 feet. Solids inside the Geotube® feel like hard clay when walking on the dewatered Geotube®.