



Dewatering Waste Stream from Winery

Objective

A winery was looking for a cost effective solution to clean out an on-site waste pond from their winery in California. They contacted Watersolve, LLC to assist in developing a turnkey approach utilizing Geotube® Containers. It was determined that approximately 175cy of solids would need to be removed from the pond and could easily be done with a simple 4" submersible pump. Watersolve, LLC would provide the Geotube® container, chemical feed unit, polymer and liner while the winery would prepare the laydown area and provide the pump.

Geotube® Container Sizing

Geotube® containers are manufactured from high strength polypropylene fabric and designed to allow effluent water to escape through the pores of the fabric while retaining the chemically-conditioned solids. A Geotube® estimator indicated 35,000 gallons of the 4.9% dry wt solids drying down to 15% would be dewatered and could easily be stored in 130' circumference by 50' long Geotube® container.

Conditioning Chemical

A representative sample of the pond sludge was tested by a WaterSolve technician in the facilities laboratory. Dewatering polymers were evaluated based on water release rate, water clarity, and flocculent appearance. In addition, dosing rate(s) were determined during bench-top dewatering experiments and recommendations provided to the winery during this phase of the program. In-Situ solids were determined to be 4.9% and Solve 127 was the recommended polymer for dewatering this residual into the Geotube® container at a dose rate of 100ppm.

The Result

Prior to startup, the winery installed aerators to agitate the solids to get them in suspension. Utilizing a tagline on a 3" hose, laborers methodically dragged the submersible pump around the pond until all the solids were removed and the pond was clean. All effluent water generated during the Geotube® container filling process was gravity fed back to a man-made lake next to the laydown area. Waterways Protection, LLC was the acting agent for Watersolve and operated the polymer feed unit making appropriate adjustments as needed to maintain the appropriate chemical conditioning.



The waste pond prior to startup.



The Geotube® container.



The Geotube® container being filled.