New Castle WWTP, New Castle Indiana

The New Castle Indiana Waste Water Treatment facility found itself with nearly 1 million gallons of accumulated wastewater sludge that needed to be dewatered and removed to the local landfill. The plant normally uses 2 belt filter presses and 10 50'X 100'drying beds to dewater and dispose of their sludge but weather issues and mechanical breakdowns lead to a large amount of sludge that was causing problems for the plant.

After exploring all the available options they decided to utilize the Blue River Technologies geotextile dewatering bags to empty out the two large circular tanks and 4 smaller rectangular tanks that were full of the accumulated sludge. Sludge would be pumped from the rectangular tanks over to the drying beds where two 45' X 100' bags were staged to accept the sludge. The two large tanks can be pumped over to the rectangular tanks as needed.

The two bags are laid out on one drying bed. Each bag has 3 fill tubes with a shut off valve and cam lock connections to allow the fill hose to be easily moved from port to port or from bag to bag as needed.
The bags will fill evenly front to back.

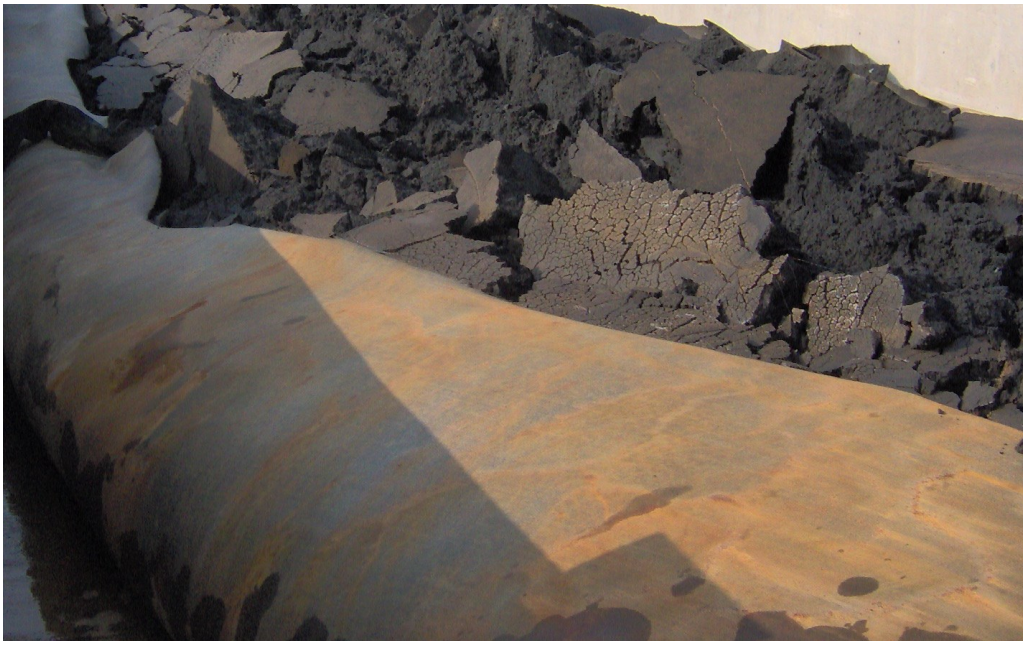
A Gorman Rupp pump is rented to pump the sludge from the rectangular holding tanks about 150 feet over to the drying bed area. The two large circular tanks also have a rental pump that is used to pump their contents over to the rectangular tanks as they are pumped down.

The plant rented a trailer equipped with a polymer make down unit and a flocculator from Blue River Technologies to complete the dewatering operation. The trailer is heated and makedown water comes from a water hydrant located near the drying beds.

A flocculator on a stand is used to flock the sludge prior to pumping it into the bag. Polymer is pumped from the trailer over to the flocculator , injected into the sludge flow and mixed with the sludge by the Blue River Technologies in line flocculator.

At this point in the process approx 400,000 gallons has been pumped into this bag. The sludge ranges from 1% solids to 1 1/2%. This bag can be pumped to a height of 6 feet. Then the pumping will be shifted to the other bag and this bag allowed to dewater a couple days before being pumped again. A second bag is to be laid next to this one now.

This tank has only a couple feet of sludge left in the bottom. All the sludge will be pumped into the geotextile bags. The tanks can be pressure washed and cleaned. The removal of over 1 million gallons of sludge will greatly improve the operation of this waste water plant and the operation was carried out in the most economical manner possible.



After the sludge pumping operation is completed , the bags will be left on the beds to dewater . They can be left on the bags as long as the beds are not needed. They can be opened and the sludge disposed of at the local landfill from as little as two weeks after the last pumping.