



## *Potato Processor is using Geotube® containers to dewater digested Potato Peels*

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These jars represent the raw, treated, and filtrate samples of the potato residual. Notice the material floating in the center jar. This explains why the water releases from the bottom of the Geotube® container.

The digested potato peels formed an excellent floc while using the Solve 216B polymer.



### The Challenge

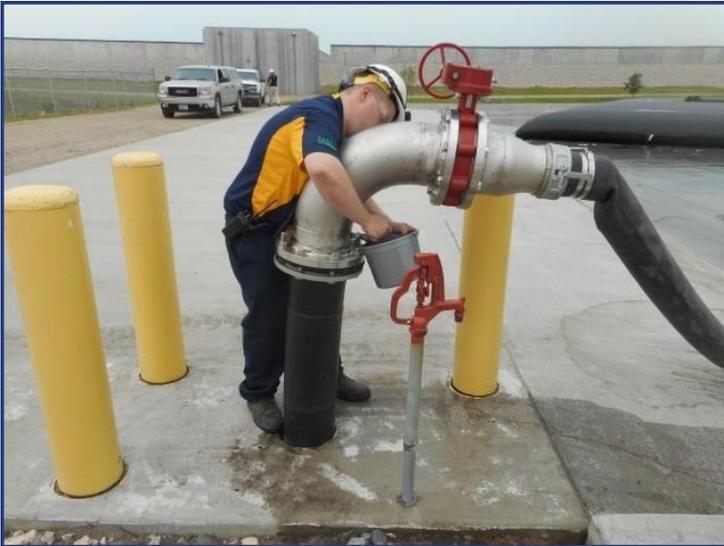
Potato peels are digested to make electric and heat for this processing plant. The plant engineers wanted to return the digested residual back to the farm fields. The objective was to dewater the digested material in a cost effective manner for subsequent hauling to farm fields in a 5 mile radius of the plant.

### WaterSolve Chemical Conditioning

A sample of the residual in the digester was sent to the WaterSolve lab to determine the best chemical conditioning program for this material. Solve 216B had the best water release, clarity, and flocculation at the lowest dose. A tote of this polymer was sent to the site prior to the startup.

### 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 45' circumference by 57' long Geotube® was used for the initial startup of the system. This would give a good trial to the system before going full scale with the dewatering.



This operator is taking a sample of the treated residual from the riser at the Geotube® container dewatering pad.

This 45' circumference by 57' long Geotube® container was laid on the pad to verify the performance prior to going with the full scale tubes. It dewatered very well. The majority of the water was exiting the bottom of the tube at the seams of the tube and the seams in the cement.



### **The Solution**

A WaterSolve technician was on site to start up the system and train the operators on the proper polymer feed rates and the management of the Geotube® containers. The polymer feed system was located in the pump building approximately 300' from the Geotube® pad. A flow meter indicated the rate the residual was pumped to the pad and a variable speed pump provided adjustments along with valves to alter the flow rates. There was a sample port in the pump building for treated samples and a sample port on the riser at the dewatering pad. Taking samples at both spots provided visual observations of the polymer dose and adjustments to the treatment were made from these samples. The one surprising behavior was the floating of the residual in the Geotube®. The majority of the water exited the bottom of the tube. When we restarted the system the material in the tube seemed to float while filtrate water was exiting the bottom of the tube, particularly where there was a seam in the tube or a seam in the concrete. The startup was a success and the operation went full scale shortly thereafter.