CASE STUDY

Helixpress®

Fritolay

Dewatering recovered by-product saves $10,000/year

Overview

The wastewater facility of Frito-Lay, Inc., Kern Plant, located in Bakersfield, CA, consists of a waste/solids handling and dewatering system and other systems involved in starch recovery and wastewater disposal. The wastewater, loaded with pieces of potato and corn, flows into a sump. From there, it is pumped through a screen to recover the valuable solids. Liquid drains to a transfer sump for land disposal and the captured screenings are sold as by-product.

Problem

The screened solids contained a high percentage of water, (90% according to laboratory tests), and this limited the revenue they could generate.

Solution

The plant tested various dewatering presses to determine whether dewatering could increase the value of the by-product to help offset operating costs. A Helixpress®, Model SPR-260, was one of several dewatering presses tested, and it performed well, resulting in a drier by-product with only 80% moisture content which is the equilvalent of a raw potato. The Helixpress® unit removed all free liquid which reduced volume by almost 40%. Based on projections, the Kern plant estimated it could save $10,000 a year by dewatering the screenings with a Helixpress unit. Consequently, the purchase was cost justified. The press was positioned directly under the screen, and the dewatered screenings discharged directly into a hopper. The procedure was clean, efficient and required no operator supervision.

Result

By using a Helixpress® unit, the number of loads shipped decreased 40%. The plant had previously received only $1.00 a ton for the wet screenings; however, the dewatered screenings were valued at $2.50 a ton. The actual number of loads decreased from 4 to 2.5 loads daily. Labor, which had been essential for cleaning up the drippy solids and loading them into trucks, was practically slashed in half.

The Helixpress® conveying/dewatering press is a spiral press that compacts and dewaters simultaneously with gradual pressure. The result is exceptionally dry solids, even from starchy potato and corn screenings.

The press is available in different lengths and can be fed from different locations to eliminate multiple conveyors.

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