



Shaftless Screw Conveyor System to Elevate Dewatered Biosolids at Montoursville, PA WWTP

General Description of the Application

Shaftless screw conveyor system to elevate dewatered biosolids from a Belt Filter Press (BFP) to two loading bays and evenly distribute the biosolids in either of two dumpsters. The proximity of the BFP to the loading area and the limited headroom in the loading represented a special problem and a very unique solution.



Design Parameters of Application

Type of sludge: Dewatered Digested Sludge from Wastewater Treatment

Material density: 55 to 65 Lbs. per Cubic Foot

Solids, percent by weight: 20% Total Solids

Capacity (max): 3 Wet Tons per Hour

Capacity (max): 160 Cubic Feet per Bin



Plant Name and Location

Montoursville WWTP

Lycoming County Water & Sewer (LCWSA)

Montoursville, PA 17754

Consulting Engineer

BRINJAC Engineering, Inc.

Harrisburg, PA 17101

Contractor

G.M. McCrossin, Inc.

Bellefonte, PA 16823

Advantages Provided by KWS

KWS Environmental provided a fully engineered system including mechanical design, controls and instrumentation, as well as manufacturing the complete system in the US. KWS provided significant experience with shaftless vertical conveyors to elevate difficult dewatered biosolids and expertise with pivoting loading conveyors. Our on-site training and start-up services ensured that the system was installed and operating properly to the satisfaction of the contractor and end user.

KWS's engineering expertise with shaftless conveyors and our ability to model the complete system using our 3D parametric software was invaluable to integration into the plant and coordination with other process equipment.

Special Features of KWS Design

KWS provided our exclusive 340 Brinell hardness (BHN) spirals for the shaftless screw conveyors. KWS-340 spirals are the strongest and toughest on the market. They are designed to outlast all other spirals available and provide many years without replacement. Other features include the shaftless vertical conveyor, drip-tight slide gates and control system that provided fully automatic loading of one of two dumpsters.

"The system provided by KWS Environmental works well and makes loading multiple dumpsters easy. We like that the loading conveyor can be parked out of the way when changing dumpsters."

Zach Bitler, Lycoming County Water & Sewer



**Design
Engineering
Manufacturing**

KWS Manufacturing

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