

CASE STUDY

Application:

- *Consumer Beverage Waste Water Pre-Treatment Plant*

Material:

- Aerobic Digested Sludge
- .5% -.75% Solids

Problems & Challenges:

- Very Difficult Sludge to Dewater due to Low Bulk Solids and Process Issues
- Existing 1.5 Meter Press Single Belt Unit Process Rate of 8 – 12 GPM is Too Slow to Effectively Remove Sludge from the Plant
- Free Water Visible in the Roll Off Container Containing “Dewatered” Cake
- Cake Solids Too Low (4-8%) and the Landfill is Threatening to Reject the Loads
- Expensive Liquid Hauling had to be Used to Supplement Belt Press Dewatering
- Owner Desired to Dewater Only One Shift per Day (or Less)
- Sludge will Flow Over the Roll Off Container Walls when the Driver Tilts it to Load
- No D.O. (Dissolved Oxygen) in the Liquor (Sludge) because of Slow Solids Removal

Solution: Pilot Testing, Equipment and Support from Bright Technologies

- Bright Lab Tested the Sludge and Pilot Tested at the Customers Site to Confirm Lab Results and Establish “Real World” Parameters for System Design and Sizing.
- Pilot Test Revealed that our 0.8 Meter Dual Belt Press could do >30GPM at 15% Cake Solids
- A Complete System was Designed, Manufactured, & Delivered
- Bright Assisted in Polymer Testing and Evaluation
- Bright Trained the Owner’s Operators and offered valuable process assistance.

Old Vs New Equipment Comparison

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|-------------------------------|--------------|------------------------|
| • 1.5 Meter Single Belt Press | 8 – 12 GPM | @ 4 - 8% Cake Solids |
| • Bright 1.7 Meter Belt Press | 80 – 100 GPM | @ 14 - 16% Cake Solids |

Results:

- **Running 8-9 Times the Flow Rate of the Single Belt Press & 6-10% > Solids**
- **Sludge Transportation & Disposal Cost Slashed by >50%**
- **Can Make Daily Productions Rates Running Only One Shift**
- **Meets Landfill Criteria Every Time!**
- **Sludge D.O. Levels in the Mixed Liquor (Sludge) Restored to 5 - 6**
- **More “Forgiving” of Sludge Variation than the Previous Equipment**
- **Bright Technologies Equipment & Support Exceeded the Owners Expectations**