Case Study

High Density Extruder - Dairy Plant

Client Overview:

- A full-product-line dairy plant
- Struggled to manage waste steam effectively
- Waste stream included returned dairy products and expired materials including fluid milk, ice cream, cottage cheese, fruit juice, and general plant refuse

Objective:

Evaluate the operational and environmental impacts of replacing old equipment to improve liquid recovery and compliance with landfill regulations.

Conclusion:

Sebright Products' 4030X High Density Extruder addressed the complex needs of the dairy wholesaler through significantly reducing the amount of loads each month by 88% and average load tonnage by 64%. The loads were substantially drier, allowing the dairy wholesaler to comply with the Resource Conservation and Recovery Act's (RCRA) Subtitle D Regulations needed for landfill disposal. Additionally, general housekeeping was improved, and labor savings were reduced. Using this technology allowed the dairy wholesaler to significantly increase operational efforts, along with complying with landfill requirements long-term.

Key Pain Points:

- Monthly waste volume of 9 loads (30 cubic yards each), averaging 23.4 tons
- Poor performance from existing equipment, including leaking, breakdowns, and inadequate dewatering capabilities
- Increased enforcement of local wastewater disposal regulations, making compliance a challenge
- Material was too wet to meet landfill disposal requirements

Solution:

The dairy plant installed a 4030X High Density Extruder, which doubled liquid recovery and created drier waste loads compliant with landfill regulations.

Results:

- **Waste Volume Reduction:** Monthly waste volume decreased to 1 load (35 cubic yards), reducing average waste tonnage from 23.4 tons to 8.5 tons.
- **Cost Efficiency:** Monthly transportation expenses decreased slightly to $2,757, despite handling a significantly drier waste stream.
- **Liquid Recovery:** Daily liquid recovery doubled, enhancing resource utilization for animal feed.
- **Regulatory Compliance:** Waste loads met Subtitle D regulations, avoiding potential fines and legal issues.
- **Operational Improvements:** Housekeeping improved, labor savings were realized, and outdated equipment was replaced with reliable, state-of-the-art technology.