

Dairy effluent odour controlled by seepex.

Dairygold Co-Operative Society Ltd. is Ireland's largest farmer owned food company and multi-purpose agribusiness. Its range of business includes dairy and meat processing and liquid milk production.

The effluent treatment plant at Mitchelstown in Cork processes all the effluent from both the milk and cheese plants in the town.

In the past settled sludge was spread onto fields in liquid form, however, in the modern era it is not possible to spread liquid sludge on land all year round. In addition to these restrictions there was a need to reduce transport costs and so now all sludge is dewatered. This dewatered sludge is stored off site and spread on land when conditions are suitable. Peak sludge production and land spreading occur over the summer months but during warmer weather odour control can be an issue.

The starting situation

Dairygold decided to add quicklime (CaO) to the dewatered sludge both to stabilise it and to reduce odour. In addition, they wanted flexibility to pump dewatered sludge from either of the two Westfalia centrifuges using more complex pipe work to multiple skip locations.

Kieran Ryan, Project Engineer at Dairygold said "We wanted to achieve efficient lime mixing, precise dosing for controlled temperature and pH rise, and an overall improvement in the economics of lime addition."

The solution

seepex's engineers devised a tailored solution to transport between two and six tonnes per hour of 15-18 % dry solid dewatered sludge and dosing it with up to 40 % quicklime. This customised solution incorporates a pump fitted with an integral bridge breaker/mixing device, and lime metering system to control the dosing of quick lime. The purpose designed control system allows integrated measurement of sludge level, pressure and temperature as well as efficient lime dosage in order to achieve the pathogen kill and pH rise. The enclosed discharge pipe work and automated valves enable the filling of four skips.



Lime silo and condition sludge container storage



seepex BTI lime mixing pump

The benefit

Since being commissioned the seepex pump has been running continuously without problems and with manual handling of blocks limited to de-packing.

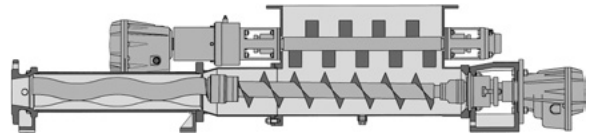
“This operation, which is inconspicuous in a positive sense, is valued by all employees”, reports the maintenance shift supervisor confidently.

Key Facts

- Only one pump required
- Reduced odours and improved community relations
- Controlled temperature and pH rise
- Improved flexibility

Significant Cost Savings

- 20 % reduction in lime costs
- Reduction in transport and effluent disposal costs and pH rise
- Improved flexibility



Installed Pump Type

- Range BTI

And what can we get flowing for you? Your nearest contact:

Or visit www.seepex.com