

RECORDED BENEFITS

- 23% lower flocculant consumption
- 15%+ cake dryness maintained with less variability
- 36% improvement in filtrate water quality
- 27% less makedown water consumption
- 345,600 gallons of water saved annually

Nanobubble Technology Improves Dewatering Performance While Reducing Chemical and Water Consumption

NoveraSM Nanobubble Performance Program

Customer Challenge

A municipal wastewater treatment plant operating two Phoenix WX2.28H8 belt filter presses wanted to reduce its consumption of flocculant while maintaining cake dryness above 15% to help lower sludge disposal costs. The plant's biological treatment process produced relatively young sludge without inorganic metal salts, resulting in cake solids that typically ranged from 12 to 15% throughout the year.

Recommended Solution

Following a thorough process assessment, Solenis recommended that the plant implement the Novera Nanobubble Performance Program, which combines a patented nanobubble generator from Moleaer with Solenis chemistry and application expertise. In this application, nanobubbles were introduced into the polymer makedown water to improve the efficiency of the ZetagTM flocculant used. The Novera program not only improves polymer activation but also strengthens solids separation, reducing chemical and water consumption.

Results Achieved

During full-scale operation of the Novera program, flocculant consumption decreased from 3.5 GPH to 2.7 GPH (a 23% reduction) while maintaining 15%+ cake dryness. Filtrate water quality improved by 36%, and polymer makedown water consumption decreased by 27%, saving the plant 345,600 gallons of water annually.



XTB Nanobubble Generator

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