Automation of Thickening and Dewatering Operations

The Water Environment Research Foundation (WERF) Board of Directors selected Carollo's proposal on Optimizing Thickening and Dewatering Operations through Automation (RFP 98-REM-3) for funding in 1998. The premise of the project submitted by Carollo is that implementation of fully-automated biosolids processing can reduce operational costs. As agencies seek to do more with less, automation provides a potential opportunity to operate various processes with a smaller staff, while incorporating additional cost saving benefits.

Previous studies dedicated to the research and development of dewatering automation packages concentrated on the theory behind the monitoring device. Little objective research has been conducted to either quantify or qualify the applicability and overall value of automatic solids handling process control. Our study proposes to take the research on automated thickening and dewatering process control to the next level by performing long-term operational tests on automation packages that are likely to work. Automation for solids handling equipment allows the operator to direct the automation package to control for minimum polymer use, maximum cake solids, or maximum throughput. Implementation of an automation package increases the consistency of the cake solids which allows for better control of down stream solids handling processes.

Cutting-edge work on solids process control allows us to offer our clients first-hand knowledge of emerging automation technologies that are available for process optimization.