Application
Thickened sludge totalized flow measurement

Application Characteristics
5-7% thickened sludge, consistency of pudding

Customer
Wastewater services operator in northeast USA

Challenge
The facility manager for this wastewater treatment facility had challenges with inaccuracies of thickened sludge custody transfer measurement. The facility produces thickened sludge which is temporarily stored in holding tanks. The sludge is then loaded into hauling trucks to be transferred to landfills and other users.

This facility was previously using a clamp-on ultrasonic flow meter in an 8-inch pipe for custody transfer flow measurement. The ultrasonic flow meter inaccurately measured the totalized flow of the thickened sludge hauled due to coating and the high solids content.

Inaccurate custody transfer measurement resulted in several negative business impacts. The treatment facility frequently overpaid the hauling company based on the inaccurate measurement. High operation costs resulted from excess hauling truck trips due to underfilled trucks. Routine troubleshooting of the ultrasonic meter and flushing the lines to remove build-up also resulted in high maintenance costs.

Results
• Improved accuracy of payables
• Reduced operation and maintenance costs

The Rosemount™ 8750WA Magnetic Flow Meter provided higher flow accuracy and was not affected by the high solid content.
Solution

Rosemount™ 8750WA Magnetic Flow Meter System solved the facility manager's problem of inaccurate sludge measurement. The Rosemount 8750WA provided higher flow accuracy and was not affected by the high solid content. Decreasing the Rosemount 8750WA Flow Meter size below the line size increased the velocity through the meter and reduced the build-up.

By improving the sludge flow measurement, the facility manager was able to increase the accuracy of payables to the hauling truck company. He also reduced operations and maintenance costs by reducing trucking needs and time spent troubleshooting the custody transfer measurement and flushing the lines to reduce build-up.

Rosemount 8750WA Magnetic Flow Meter