

# Lower Berkeley County solves coating issues in primary sludge line with electrode coating diagnostic

## RESULTS

- Eliminated meter failures
- Reduced operation and maintenance costs
- Reduced down time for maintenance and cleaning



## APPLICATION

Wastewater treatment plant primary sludge transfer measurement

## CUSTOMER

Berkeley County Water & Sanitation; Lower Berkeley Wastewater Treatment Plant, Goose Creek, SC

## CHALLENGE

The Plant Electrical Maintenance Manager for the Lower Berkeley County Wastewater Treatment facility had problems with primary sludge coating the electrodes in the sensor causing the meter to fail. The process had to be shut down, the tube removed, cleaned and placed back in-line causing significant downtime and added maintenance costs. This was happening about every three months and they had to be reactive in their maintenance response because they never knew when the unit would fail.

Lower Berkeley Wastewater Treatment Plant primary sludge contained grease from industrial wastewater discharge which mixed with the sludge and formed a material that was coating the electrodes and solidifying to a paper mache-like consistency.

Because the amount of coating varied due to several factors, the amount of grease in the media and temperature, there was no way of knowing how much material was building up on the electrodes. The operators had to wait until there was a failure before they could service the meter. The line had to be shut down and the meter removed causing disruptions in operation. Maintenance schedules were also disrupted because personnel had to be pulled from routine maintenance to address the meter failures.

*“The Rosemount magnetic flow-meter electrode coating diagnostic allows us to monitor the coating of the electrodes and warns us so we can clean the unit before a failure.”*

*Steve Wolfensberger,  
Electrical Maintenance Manager*



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## SOLUTION

Rosemount 8750WA Magnetic Flowmeter solved the problem of electrode coating. The 8750WA tube was replaced with a tube using bullet-nose electrodes. A transmitter with the electrode coating diagnostic was installed. The diagnostic monitors the electrode resistance value changes caused by build-up on the electrodes. By determining the electrode resistance value just prior to a failure, the meter was set to warn the operator before that value is reached.

Advance warning of a pending failure gives the operators the ability to schedule maintenance and service the meter before a failure occurs, thus eliminating down-time and reducing maintenance headaches.

## RESOURCES

### Rosemount Magnetic Flowmeters

<http://www2.emersonprocess.com/en-US/brands/rosemount/Flow/Magnetic-Flowmeters/Pages/index.aspx>

### Rosemount 8750WA Magnetic Flowmeter

<http://www2.emersonprocess.com/siteadmincenter/PM%20Rosemount%20Documents/00813-0100-4750.pdf>

*“Between switching to bullet electrodes, flushing the system and the coating diagnostic we have not had a failure since.”*



*Installed Rosemount 8750WA Magnetic Flowmeter*

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### Emerson Process Management

Rosemount Division  
8200 Market Boulevard  
Chanhausen, MN 55317 USA  
T (U.S.) 1-800-999-9307  
T (International) (952) 906-8888  
F (952) 906-8889

[www.rosemount.com](http://www.rosemount.com)

### Emerson Process Management

#### Latin America

1300 Concord Terrace, Suite 400,  
Sunrise, Florida 33323 USA  
Tel + 1 954 846 5030

### Emerson Process Management

Blegistrasse 23  
P.O. Box 1046  
CH 6341 Baar  
Switzerland  
Tel +41 (0) 41 768 6111  
Fax +41 (0) 41 768 6300

### Emerson FZE

P.O. Box 17033  
Jebel Ali Free Zone  
Dubai UAE  
Tel +971 4 811 8100  
Fax +971 4 886 5465

### Emerson Process Management

Emerson Process Management Asia Pacific  
Private Limited  
1 Pandan Crescent  
Singapore 128461  
T (65) 6777 8211  
F (65) 6777 0947  
[Enquiries@AP.EmersonProcess.com](mailto:Enquiries@AP.EmersonProcess.com)

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