Monroe County Waste Treatment Facility Brings Stranded Flow Measurements On-Line

RESULTS
- Reduced operator rounds
- Improved reporting
- Improved odor control
- Improved safety

APPLICATION
Stranded Mag Flow measurements and totalization

CUSTOMER
Monroe County Pure Waters, Van Lare plant in Rochester NY and the Northwest Quadrant (NWQ) plant in Hilton, NY. These wastewater plants are located on the south shore of Lake Ontario. Van Lare dates back to 1916 and is the largest treatment plant in Monroe County with a rating currently at 135 million gallons a day with a capability of handling 660 million gallons a day.

CHALLENGE
Monroe County Pure Waters had “stranded” flowmeter readings on three lines that were important to monitor, for both instantaneous and total flow. “The flow measurements were located in a separate building in this mile-long plant,” said Helfer. “Operators would go take readings once an hour, come back and write down the instantaneous flows, and manually totalize the flows. We wanted to significantly reduce these rounds, as well as eliminate manual recording and totalization.”

The meters were too far away to wire into the PLC. There was no conduit, and there was also the problem of the I/O rack being full when the SCADA system was first installed.

SOLUTION
The plant purchased three Wireless THUM Adapters for the three magnetic flowmeters that needed to be brought on-line. At the same time, a Wireless Gateway and three vibration transmitters were purchased, building an infrastructure for the wireless network. “The THUMs and gateway were easy to install,” said Helfer. “They started up and linked within minutes. I was shocked that they could communicate through steel reinforced concrete and glass.”

“We significantly reduced operator rounds, as operators were going out 24 times a day to record these flow measurements. We eliminated paperwork for recording of the instantaneous and total flows, and also eliminated manual flow totalization. We have much more accurate reporting now, and have better odor control.”

Jeff Helfer
Instrument Technician
Monroe County Pure Waters, Rochester and Hilton, NY
He also noted, “The THUMs talk to any HART device, and have enabled us not only to bring in the required flow measurements, but also the tube and transmitter diagnostic information.”

Now the plant has instantaneous flows that operators can monitor from the control console. This is important for flows like the chemical recirculation loop in the scrubber. “Odor control is important in our plant, for public relations,” said Helfer. “The recirculation flow of the chemical we use in the scrubber must maintain a specified flow rate. If a unit tripped out, the operators wouldn’t know if the flow stopped, and we could have an odor release.”

Reaction to these wireless measurements has been positive. “We significantly reduced operator rounds, as operators were going out 24 times a day to record these flow measurements. We eliminated paperwork for recording of the instantaneous and total flows, and also eliminated manual flow totalization. We have much more accurate reporting now, and have better odor control,” Helfer concluded.

RESOURCES

Emerson Process Management Water/Wastewater Industries
http://www2.emersonprocess.com/en-US/divisions/power-water/Pages/powerwater.aspx

Emerson Smart Wireless Gateways

Smart Wireless THUM™ Adapter

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