

Optimizing Water Reclamation Systems by Automation using Continuous Water Quality Analysis

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FORMAT

30 minute presentation

KEYWORDS

Automation, Water Reclamation, Dissolved Solids, Suspended Solids, pH, ORP, Dissolved Oxygen, Total Organic Carbon, Denitrification, Dephosphatization, Process Analytical Instrumentation

ABSTRACT

Due to growing demand for clean water worldwide, it has been important for municipalities and industries to build waste water treatment systems that produce effluent water with quality almost - or up to - drinking water standards. Qualified operators have become more difficult to find due to demographics and the aging working population. Automation of these systems using water quality analyzers have made quality effluent easier to achieve on a consistent basis.

This presentation will review the optimum location and maintenance of analytical methods used from the primary clarifier to final disinfection before effluent release, based on successful installations. Other automated processes discussed will include aeration, denitrification, and ultraviolet treatment. Recommendations such as cleaning and calibration frequency will be provided for optimizing the reliability of on-line oxidation reduction potential (ORP), pH, suspended solids, dissolved solids, dissolved oxygen, Total Organic Carbon data to and other methodology. This reliability is critical to make sure that automation will produce the clean effluent water desired.

ABOUT THE AUTHOR

Vickie Olson is Analytical Product Consultant for Honeywell Process Solutions out of the Atlanta, Georgia area. She has been involved in process instrumentation and analysis for industrial and municipal applications for over 26 years as a chemist, product specialist or sales manager for Honeywell, Hach, and other companies. In her current role at Honeywell, Vickie provides analytical instrumentation application consulting to the eastern half of the United States, Europe, and Asia.

Vickie presented papers on water analysis at conferences including the International Water Conference, ISA WWAC, and ISA Analytical Symposiums. She wrote articles for several publications, most recently *Water and Waste Digest*, *Power Engineering* and *PowerPlant Chemistry*. She has a Bachelor of Science in Textile Chemistry from the Georgia Institute of Technology and a Masters in Business Administration from Georgia State University.