



University of Pittsburgh Graduate Student Chapter Carnegie Mellon University Graduate Student Chapter

EWRI-PGH DINNER AND SEMINAR

Thursday, April 16th

Dinner at 5:30 pm, Seminar at 6:00 pm

Engineer's Society of Western Pennsylvania
337 Fourth Avenue, Pittsburgh, PA 15222



Image from www.wsacc.org

Innovative Disinfection

Comparing Peracetic Acid with Sodium Hypochlorite Disinfection

Craig Patterson, U.S. EPA's Water Supply and Water Resource Division

Like many cities, Cincinnati is attempting to find the best way to meet state and federal requirements concerning combined sewer overflow (CSO) wastewater. The Muddy Creek CSO treatment facility is part of the Metropolitan Sewer District of Greater Cincinnati (MSDGC) and currently disinfects CSO wastewater with sodium hypochlorite. However, hypochlorite may degrade during storage and form chlorinated disinfection byproducts (DBPs). MSDGC is therefore evaluating alternative disinfectants, such as peracetic acid (PAA).

Craig Patterson from U.S. EPA's Water Supply and Water Resource Division will present on the effectiveness of sodium hypochlorite and PAA to inactivate *E. coli* in CSO wastewater, measured from laboratory bench-scale jar tests and Muddy Creek field site studies. The following items will be discussed:

- Storage, shelf life, and application of the disinfectants.
- Effectiveness of the disinfectants in the inactivation of *E. coli*.
- Formation of harmful byproducts by the disinfectants.
- Operation and maintenance costs

Craig Patterson received his Bachelor of Science in Civil Engineering and Master of Science in Environmental Engineering from the University of Cincinnati. Since joining U.S. EPA in 2003, he has been leading research studies on drinking water and wastewater treatment technologies applicable to small communities.

Additional Seminar: Innovative Bauxite Residual Disinfection

Dr. John Smith, Director of Sustainable Technology Commercialization, Alcoa Inc.

Sponsored by:



Cost

Members: \$30

Non-members: \$35

Students: \$15

Register by April 14th at <http://www.asce-pgh.org/> or email Timothy.Brett@xyleminc.com