

BOD, Metabolism, ORP, Sludge Production & Troubleshooting Activated Sludge with a Microscope

with Michael Gerardi

Monday, April 13, 2009
E.J. Prescott, Gardiner, ME
8:30 a.m. – 3:30 p.m. (Sign-in begins at 8:00 a.m.)

Morning: BOD, Metabolism, ORP and Sludge Production

Sludge disposal is the costly endpoint of wastewater treatment. In the morning session, we will examine the correlation between BOD, metabolism of BOD and sludge production. We will review the quantity and quality of BOD that enters the treatment process and its fate as it degrades to a less or non-polluting waste, transforms to new bacterial cells, or passes through as effluent BOD. The five basic bacterial pathways to BOD degradation and their consequences are presented. The use of ORP is examined as an analytical measurement used to track the aforementioned processes.

Afternoon: Troubleshooting Activated Sludge with a Microscope

This is a lecture presentation of equipment needs and microscopic techniques for the identification of acceptable and non-acceptable conditions and organisms in activated sludge and foam. We will review the components of a microscopic examination including dispersed growth, particulate material, floc particles, filamentous organisms, protozoa and metazoan. We will also discuss counting techniques for protozoa and total organisms along with photomicrographs, rating tables, worksheets and the correlation of microscopic observations to



Presenter: Michael Gerardi holds an MS in biology from James Madison University and provides wastewater operator training and troubleshooting of municipal and industrial wastewater treatment plants in the United States, Canada, the Caribbean, and Europe. He has authored more than eighty technical articles and is responsible for the development and presentation of wastewater biology courses at the Pennsylvania State University.

Cost: \$125
Credits: 6 Training Contact Hours
Approved for Wastewater Operators
Course #: J0940
Registration Deadline 4/6/2009

Registration Form

Course Title _____ Course # _____
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Indicate method of payment **Amount Enclosed \$** _____
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Or fax with a purchase order to: 207/771-9028 or call 207/253-8020

PLEASE NOTE: Enrollment is on a first-come, first-served basis, so please return your application as soon as possible. Due to limited classroom space and the popularity of certain subjects, we often reach capacity. We appreciate you taking time to notify us if you cannot attend a course for which you have registered. This makes a big difference to someone else who requires the training. **THANK YOU!**

• **Checks/Money Orders:** Should be made payable to "JETCC Training."

• **Registration Deadline:** Please note registration deadline above. Registrations after this time will incur a \$15 late fee.

• **Cancellations/No Shows:** If you must cancel, four working days notice is required. Cancellations received after this time will be charged \$20 for full-day programs and \$10 for half-day programs. Registrants who do not cancel or who fail to show are responsible for full payment.

• **Credits:** Participants must attend ALL hours of training to be eligible for Training Contact Hours. TCHs are awarded upon completion of a course. The certificates are mailed to participants.

• **TCH's:** This course is approved for wastewater license-renewal training contact hours.

• **Use one form per course.** Photocopy this page to apply for multiple courses.