

WASTEWATER LABORATORY TRAINING SERIES

(3 contact hours each)

2010

**CARBONAEUS BIOCHEMICAL
OXYGEN DEMAND (CBOD)**

FECAL COLIFORM

SOLIDS ANALYSIS

**BASIC WASTEWATER
LABORATORY TECHNIQUES**

**WASTEWATER SAMPLING
TECHNIQUES**



**OPERATOR TRAINING COMMITTEE OF OHIO,
INC.**

Since 1964

"Ohio's Environmental Training Center"

3972 Indianola Avenue
Columbus, OH 43214
(614) 268-6826 Phone
(614) 268-3244 Fax

www.ohiowater.org

COURSE OBJECTIVE

In the 80's and 90, working personnel had extra time to attend OTCO hands-on laboratory training short schools for 2-5 days consecutively. With the strained resources in and the demands of doing more and knowing more about your facilities does not allow the luxury we had in the last century.

Using PowerPoint and instructor performed classroom demonstration, participants will witness, proper techniques in performing the following procedures in accordance to acceptable Ohio EPA procedures.

Students will be given a Compact Disc (CD) outlining the procedures so they may view them when returning to their respective laboratory.

INSTRUCTORS

Instructors have a minimum of three (3) years experience in performing reportable laboratory results to Ohio EPA. Instructors have successfully completed the DMRQ annual procedures forwarded to wastewater laboratories in Ohio. Ohio EPA utilizes these unknown samples to check the laboratory personnel's ability to successfully analyze unknown quality control samples.

COURSE LOCATIONS

Bryan McKee with The City of Circleville
Circleville Wastewater Plant
799 W. Main St
Circleville, Ohio 43113

Amy Fuller with The City of Zanesville
Ohio Rural Water Association
55 Whites Rd.
Zanesville, Ohio 43701

Christen Wood with The City of Ashtabula
Ashtabula Wastewater Plant
303 Woodland Ave.
Ashtabula, Ohio

REGISTRATION FEE

\$95 per course - NO ON SITE REGISTRATIONS

CANCELLATIONS

Prior to the deadline will receive a full refund. Cancellations after the deadline until the first day of class are subject to a \$25 service charge. **NO REFUND FOR THOSE WHO REGISTER AND FAIL TO ATTEND.**

OTCO REGISTRATION FORM
Wastewater Laboratory Training Series

Check your selected location(s) & return entire application

Basic Wastewater Laboratory Techniques

Participants should expect to learn basic laboratory techniques. Topics covered will include sampling and preservation, labeling, glassware selection, use and cleaning, proper handling of acids and bases, pipetting, liquid measuring, volumetric, gravimetric colorimetric analysis, and basic laboratory safety. This hands on workshop is intended for people with limited knowledge of general laboratory procedures.

Wastewater Sampling Techniques

Participants will learn different methods for collecting samples used for permit reports & process control. Topics covered will include types of samplers, sludge, sampling, influent & effluent sampling, Clean Hands/ Dirty Hands & sampling containers. There will be hands on collection demonstration using clean tap water.

Solids Analysis

Participants should expect to learn techniques used for determination of solids in the wastewater treatment cycle. Methods covered will include Suspended Solids, Total Solids, Dissolved Solids, solids and volatile solids. Practice calculations will be performed for each analysis using a calculator.

Fecal Coliform

Participants should expect to learn the membrane filtration technique for fecal coliform analysis. Information covered will include: equipment use and preparation, media preparation, filtration method, plate counting and calculations. A PowerPoint presentation will be coupled with hands on demonstrations and example calculations. Students should bring a calculator.

Carboneaceous Biochemical Oxygen Demand (CBOD)

Participants should expect to learn how to perform the 5 day BOD and CBOD analysis. Information covered will include BOD history and development, scope and application of the analysis, the difference between BOD and CBOD, sampling requirements, method, reagents and glassware used, dilutions, troubleshooting, and calculations. A PowerPoint presentation will be coupled with hands on demonstrations and example calculations using a calculator.

ASHTABULA

- Each course is 3 Contact Hours - *(No lunch offered)*
- 4/9/2010 - Wastewater Sampling Techniques
1pm to 4:15 pm
 - 4/15/2010 - Basic Wastewater Laboratory Techniques - 1 pm to 4:15 pm
 - 4/23/2010 - CBOD/BOD -
1 pm to 4:15 pm
 - 4/ 24/2010 - Wastewater Sampling Techniques
9 am to 12:15 pm
 - 4/24/2010 - Wastewater Sampling Techniques
1:15 pm to 4:30 pm
 - 4/29/2010 - Solids Analysis
1 pm to 4:15 pm
 - 5/1/2010 - Solids Analysis
9 am to 12:15 pm
 - 5/1/2010 - CBOD/BOD
1pm to 4:15 pm
 - 5/21/2010 - Fecal Coliform
1 pm to 4:15 pm

CIRCLEVILLE

- Each course is 3 Contact Hours - *(No lunch offered)*
- 4/ 20/2010 - Wastewater Laboratory Techniques
12 pm to 3:15 pm
 - 5/18/2010 - Wastewater Sampling Techniques
12 pm to 3:15 pm
 - 6/15/2010 - CBOD/BOD
12 pm to 3:15 pm
 - 7/ 20/2010 - Solids Analysis
12 pm to 3:15 pm
 - 8/17/2010 - CBOD
12 pm to 3:15 pm

ZANESVILLE

- Each course is 3 Contact Hours - *(No lunch offered)*
- 4/29/2010 - Wastewater Sampling Techniques
9 am to 12:15 pm
 - 4/29/2010 - Wastewater Laboratory Techniques
1 pm to 4:15 pm
 - 5/17/2010 - CBOD-BOD
1 pm to 4:15 pm
 - 6/22/2010- Solids Analysis
9 am to 12:15 pm
 - 6/22/2010 - Fecal Coliform

OTCO STUDENT ID #: _____

FIRST NAME & LAST NAME

TITLE

EMPLOYER

ADDRESS

CITY / STATE / ZIP

BUSINESS TELEPHONE

FAX (for confirmation)

EMAIL ADDRESS

Please check & initial if the above information needs to be updated in the OTCO Training Tracking System. [] _____

CHECK OR MONEY ORDER NUMBER

P.O. NUMBER

\$95 early fee (10 days before event)

\$115 late registration fee

Please invoice my company:

Charge to my credit card account:

Visa MasterCard Discover AMEX

Billing Zip Code (For security purposes)

CARD NUMBER

NAME ON CARD

EXP. DATE

X _____
CARD HOLDER SIGNATURE

MAIL OR FAX THE COMPLETED FORM TO:

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