



Activated Sludge May 19-20, 2020 Moncton, NB

Activated Sludge Operations Training Outline

Day 1

8:00 am – 10:00 am

Overview of Biological Treatment

- Introduction to Treatment
- Treatment Steps – Preliminary, Primary, Equalization, Secondary, Sludge Handling

10:00 – 10:15 am Break

10:15 – 12:00 Noon

Primary Clarifier Operations

- Evaluating performance
- Negative impacts on activated sludge

Growth Pressures

- Effects of: Temperature, pH, Organic loading, Dissolved oxygen, Toxics, Hydraulic loading, Spills, Nutrients

12:00 – 1:00 pm Lunch

1:00 – 2:00 pm

Process Control and Monitoring Tests for Activated Sludge Operations

- Settlemeter – measuring/assessing sludge settling characteristics
- Depth of blanket - determining clarifier inventory and sludge detention time
- Microscope - determining microbial health
- Oxygen uptake - determining metabolic rate, detecting and managing toxicity, spills

2:00- 2:15 pm Break

2:30 – 5:00pm

Controlling Recycle Sludge Flow

- RSF strategies
- Optimizing clarifier capacity
- Clarifier State Point Analysis

Day 2

8:00 am – 10:00 am

Controlling Waste Sludge Flow

- MCRT/Sludge age
- F/M
- Sludge yield
- MLSS concentration
- Sludge Inventory

10:00 -10:15 am Break

10:15 – 12:00 Noon

Controlling Aeration

- Types of Aeration, Equipment
- Monitoring, D.O. probes
- Oxygen demand, effects of spills

12:00 – 1:00 pm Lunch

1:00 – 2:00 pm

Nutrient Management

- Nutrients - ammonia, phosphate, nitrate
- Nutrient Management
- Nitrification/Denitrification

2:00 -2:15 pm Break

2:30 – 5:00 pm

Troubleshooting Sludge Settling Problems

- Foaming
- Floc Formation problems – pin floc, straggler floc
- Filamentous and slime bulking
- Low D.O. bulking, Low F/M bulking
- Nutrient-deficient bulking
- Septic/sulfide bulking
- Toxicity

PRESENTER:

Rick Marshall specializes in start-up, optimizing, and troubleshooting of wastewater and water treatment facilities, along with work in producing O & M manuals, troubleshooting guides, SOPs and other technical documents. He has over 35 years of experience in industrial (Pulp & Paper, various types of food processing, chemical, refinery) and municipal treatment systems. He has dealt with a variety operating problems ranging from sludge settling problems, floc formation problems, biomass toxicity, effluent toxicity, foaming and floating sludge problems.

COURSE LOCATION:

Codiac Transpro
140 Millennium Drive Moncton, NB

CONTACT INFORMATION:

Registration can be made by faxing or mailing the registration form on the reverse of this page. For further information, Clara Shea at 902-434-8874.

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May 19-20, 2020

Moncton, NB

Name: _____

Organization: _____

Mailing Address: _____

City, Province: _____ Postal Code: _____

Phone: _____ Fax: _____ Email: _____

Invoices will be sent to the address listed above.

PO number to be included on the invoice _____

Payment can be made by Visa, Master Card or cheque.

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Name _____

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Payment can be made by cheque and is due prior to workshop date.

Members \$630.00 plus HST 15% = \$724.50

Non-Members \$650.00 plus HST 15% = \$747.50

Lunch is on your own!

**Cheques should be made payable to:
MPWWA
C/O Clara Shea, Executive Secretary
PO Box 28142 Dartmouth, NS B2W 6E2
Phone 902-434-8874 Fax 902-434-8859**