



## Short Course #1

### Fundamentals of Brown Stock Washing and Oxygen Delignification Wednesday - May 27, 2020

A full-day Short Course presented by AllNorth Consultants & Paul Earl Consulting  
in association with the PACWEST Conference

#### COURSE INSTRUCTORS

This course will be presented by:

**Dave McIlroy, P.Eng., AllNorth Consultants Limited**

Dave McIlroy is a Senior Process Engineer with over 35 years of experience in the pulp and paper industry, including plant operations and consulting. He has completed feasibility studies, preliminary engineering and detailed design for various domestic and international pulp and paper mill projects, ranging from small mill retrofits to major greenfield installations. He has held lead roles in commissioning, start-up and operator training of equipment in the pulp and paper and chemical industries.

**Paul F. Earl, Ph.D., Paul Earl Consulting Inc.**

Dr. Paul Earl is an independent consultant with 35 years of experience in the pulp and paper industry. Paul has carried out over 280 bleach plant process audits at more than 70 pulp mills, helping clients to optimize their use of chemicals, improve product quality, and decrease operating costs. After studying bleaching under the supervision of Prof. Douglas Reeve at the University of Toronto Pulp & Paper Centre, Paul worked for Domtar and Sterling Pulp Chemicals (now ERCO Worldwide) before forming his own company in 2001, to provide bleach plant training courses, process audits, and optimization studies. Paul has presented technical papers at PAPTAC, TAPPI, and international conferences, and has published in industry journals. He has been an instructor at PAPTAC and PacWest bleaching courses and is a past chairman of the PAPTAC Bleaching Committee.

**Douglas McKenzie, P.Eng., CEM, AllNorth Consultants Limited**

Douglas McKenzie is a Principal Process Engineer with over 35 years of chemical/process engineering experience. Douglas is responsible for leading/assisting corporate process engineering initiatives. He has applied his expertise to help clients reduce their conversion costs, debottleneck mill processes, optimize power consumption, and increase their capacity to generate power. Douglas is a past chairman of the PAPTAC Bleaching Committee and member of the PAPTAC Executive Council. Douglas is a lecturer and a published author and has been awarded two patents. He also has received a BC Hydro Power Smart Energy Champion award for his leadership in energy reduction. He is a Certified Energy Manager (CEM) and is licensed to practice in both British Columbia and Alberta.

#### WHO SHOULD ATTEND?

This course has been designed for new and experienced pulp mill and supplier personnel who would benefit from both an introduction and deeper understanding of Bow Tie Risk Analysis.

#### COURSE DESCRIPTION

This one-day course has been designed to provide participants with a broad understanding of the fundamentals of brown stock washing and oxygen delignification, and their relevance in actual mill operation. Participants will learn about the theory and practice of brown stock washing and oxygen delignification, with detailed discussion of important equipment and operating parameters. Trouble-shooting and problem-solving will also be highlighted.

#### Learning outcomes:

- Fundamentals of Washing – Overview and Theory
- Washing Equipment – Overview
- Determination of Washing Efficiency and Testing
- Oxygen Delignification – Overview and Theory
- Importance of Pulp Washing Across a Fibreline
- Computer Simulation of Washing
- Mill Operations and Troubleshooting

**Registration Form:** can be downloaded from the website:

[www.pacwestconference.ca](http://www.pacwestconference.ca)

**Registration Fee:** \$275.00

#### ACCOMMODATION

Reservations at the Fairmont Jasper Park Lodge can be made directly from the REGISTRATION page on the PACWEST website by following the link or by calling the Hotel directly at 1-780-852-3301 to obtain conference group rates.

#### CANCELLATION POLICY

Each course is based on a minimum attendance. In the event that this minimum is not reached, PACWEST and the Course Leader reserve the right to cancel, postpone or amend the course accordingly. If that happens, all registration fees would be refunded. PACWEST and the Course Leader's liability are limited solely to the refund of the Short Course registration fee.

#### ADDITIONAL INFORMATION

For further information on the Course:

**Al Parsons:** [al@bancroftwestern.com](mailto:al@bancroftwestern.com)

For further information on Registration:

**info@pacwestconference.ca**