Mine Water Solutions 2027
May 10-12, 2027 · Vancouver

SHORT COURSE

INTEGRATING MINE WATER TREATMENT AND AQUATIC TOXICOLOGY TO DELIVER SUCCESSFUL MINING PROJECTS

Date: May 10, 2026
Location: UBC, Vancouver BC
Duration: 4 hours
Delivery method: in-person only. The course will not be livestreamed or recorded.
*Information provided here is subject to change

Presenters:

- H.C. Liang, VP of Technology and Solutions, BQE Water
- James Elphick, Senior Environmental Toxicologist, BQE Water

Course Objectives: The course will discuss key concepts in mine water treatment and aquatic toxicology and examine the critical interdependence between the disciplines. Participants will come way from the course with a deeper understanding of conceptual and practical aspects of utilizing best practices in mine water treatment and aquatic toxicology to develop new mining projects and to manage effluent toxicity issues at existing facilities, as well as how toxicity testing can be used to optimize treatment strategies and respond rapidly to plant upsets.

Course Summary: This course will explore the intersection between mine waste and water management, water treatment, aquatic toxicology, regulatory compliance, environmental protection, and social acceptance for mining projects, with emphasis on the key roles that aquatic toxicology and mine water treatment play in ensuring successful outcomes in mining projects. Participants will learn both theoretical and practical application of these interdisciplinary fields which are key to effective planning and execution of mining projects or to successfully troubleshoot existing treatment processes. The course will also delve into the chemistry, biology, biochemistry, and toxicology of contaminants commonly encountered in mining, along with strategies for incorporating good planning and sound science to facilitate socially and environmentally responsible water management and water treatment in the mining industry.

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H.C. Liang is currently serving as VP of Technology and Solutions at BQE Water. He earned an MS in environmental engineering from Johns Hopkins University and a PhD in inorganic chemistry from the University of Illinois at Urbana-Champaign. He has worked on mine water treatment for 19 years and has co-authored more than 40 peer-reviewed papers on chemistry and water treatment. He has taught water treatment short courses at the Rocky Mountain Water Environment Association Water and Wastewater Fundamentals School as well as short courses on biological wastewater treatment for operators.



James Elphick has 30 years of experience as an Environmental Toxicologist. He is widely recognized for his expertise in development of generic and site-specific water quality guidelines and has significant experience with the constituents of interest at mine sites in North America, including components of total dissolved solids (sulfate, chloride, bicarbonate, potassium), selenium, molybdenum, nickel, copper, nitrogenous compounds and process chemicals, such as flotation agents and flocculants.