



Vancouver Geotechnical Society

A Local Section of the Canadian Geotechnical Society

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NOTICE OF UPCOMING DINNER PRESENTATION

TUESDAY, DECEMBER 11, 2012

SUBJECT: A Case History – John Hart North Earthfill Dam Jet Grout Wall Construction

SPEAKER: David Siu, M.Eng., P.Eng.
BC Hydro, Engineering Team Lead

David Siu, M.Eng., P.Eng. is an Engineering Team Lead with BC Hydro. He obtained both his Bachelor of Applied Science and Master of Engineering degrees from University of British Columbia. David has 30 years of geotechnical engineering experience in local and international projects. His areas of expertise include site investigation, foundation design for heavy industrial, institutional and mining sectors, earthquake engineering and seismic upgrade of schools and bridges. Since 2000, David has a significant role in several dam deficiency investigations and dam rehabilitation projects. Some of the noteworthy projects include the Cleveland Dam East Abutment Seepage Control Project, the Seymour Falls Dam Seismic Upgrade Project and deficiency investigations of Cheakamus Dam, Alouette Dam and John Hart Dam.

CONTENT: The John Hart Dam is located 9 km west of the town of Campbell River. It was constructed between 1946 and 1947. The main components of the John Hart Development consist of the Intake Structure, the North, Middle and South Earthfill Dams and the Concrete Main Dam. In 2010, BC Hydro decided to improve the seepage cutoff of the North Earthfill Dam by adding a backup seepage cutoff wall. In order to minimize the impacts on the operation of the John Hart Powerhouse and the drinking water supply to the City of Campbell River, construction must be carried out without reservoir drawdown.

BC Hydro Engineering commenced the detailed design of the backup seepage cutoff wall in late 2010. An Early Contractor Involvement (ECI) process was adopted on the onset of detailed design to minimize construction risk. A specialist jet grout contractor was retained to develop a jet grouting methodology that could be used safely in the dam. The developed jet grouting methodology was proven in a field trial in the summer of 2011 before acceptance by BC Hydro. The cutoff wall construction was completed in October 2011.

This presentation focuses on the ECI process, the cement/bentonite grout mix design, various components of the field trial such as the jet grout methodology, instrumentation response during jet grouting, unexpected issues, verification testing etc., risk management measures during construction and lessons learned.

DETAILS **Executive Inn**, 4201 Lougheed Highway, Burnaby, BC V5C 3Y6 (Phone: 604-298-2010)
Social Hour: 5:30 to 6:30 pm (drinks available at the hotel bar)
Technical Presentation: 6:30 to 7:30 pm
Dinner: 7:45 pm (\$30 will be charged for dinner)
RSVP: Dinner reservation to ali.amini@shaw.ca by Monday, December 10, 2012.