



The Research Seminar Presentation by

Andrea Roebuck

will be held

Tuesday November 24th, 2015

At 11:30 am

ALEXANDER HALL 337

Title: Evaluation of microbial activity in a mature phytoremediation system within a shallow fractured bedrock system

Abstract:

Phytoremediation is non-invasive, sustainable and cost-effective and is hence an attractive alternative to remedial methods like pump and treat or physical removal. Microbial communities play a significant role in remediation and are central to the efficacy of remediation systems. This proposed research will explore the relationships between the biotic and abiotic site characteristics and the microbial communities along with their potential activity in a phytoremediation system. The field site for the proposed research is a fractured bedrock system representing a continuous aquifer. Previous industrial use is responsible for toluene contamination within the system with hybrid poplar trees (*Canadensis X Populus*) planted in a phytoremediation effort. A conceptual site model approach will be used to examine site factors including but not limited to hydrogeology, microbial community activity and composition, pollutant concentration, pH, dissolved oxygen, dissolved metals and conductivity. Assessment of efficacy and characterization of this system will provide a pertinent resource and relevant information regarding selection of remediation techniques. The research will contribute to aiding the reclamation of Canada's numerous brownfield sites.

Everyone is welcome to attend.

(This is a Research Proposal presentation by students in ENVS*6900)