Whitehorse - Tuesday, September 11, 2018

Session #2 - Water Management at Closure

Time **1135am-1155am**

Topic **Faro Mine Remediation Project- North Fork Rose Creek Realignment - Urgent Work Project**

Abstract Faro Mine, a lead zinc operation located in central Yukon, operated from 1969 until 1998, when the final owner went into bankruptcy and the mine was abandoned. The abandoned mine is co-managed by the Federal Government, represented by Indigenous and Northern Affairs Canada in association with the territorial government, represented by the Yukon Government Assessment and Abandoned Mines. The Faro Mine Complex comprises three open pits, 300 million tonnes of acid-generating waste rock, 50 million tonnes of acid-generating tailings, two tailings dams, numerous diversion channels, along with various haul and access roads. Closure planning is underway but an "urgent work" project has been created to deal with a significant contamination risk before implementing closure. The North Fork Rose Creek Realignment Project requires the design and construction of a new non-contact water diversion channel and contact water collection system to realign the creek and protect the clean creek waters flowing from the upstream watershed from impacted seepage from the waste rock dumps. This presentation will focus on the design challenges and northern considerations regarding the NFRC Realignment Project, including unspecified impacted seepage locations, nearby important mine infrastructure, management of in channel ice build-up, permafrost and its associated challenges including cover and thaw attenuation, limiting settlement, and sequencing implications. Fish habitat impacts and compensation and management of contaminated water during construction are other key considerations of this project.

Presenter(s) Jim Cassie, BGC Engineering Inc; Jon Dixon CIRNAC

Bio(s) Mr. Cassie has extensive experience in the design, construction, operation and closure of mining projects located in northern and cold regions. His areas of expertise include permafrost characterization, foundation input, dam design and inspection, tailings management planning and water balance, diversion channel design and assessments, soil cover design and mine closure planning, design and permitting. Mr. Cassie has been involved with the design, construction and post-closure monitoring of three northern mines including Nanisivik Mine, NU (1998 to present), Discovery Mine, NT (2000 to 2013) and Faro Mine, YT (1996 to present).

Mr. Dixon is a senior engineer with Crown Indigenous Relations and Northern Affairs Canada with the Faro Mine Remediation Project located in Whitehorse. He has ten years of experience in construction, mining and infrastructure projects across Canada's North. He is CIRNAC's project manager for Urgent Works implementation, which includes the North Fork Rose Creek Realignment Project.