

Refining Drilling Waste Compliance Option Calculations for Salts and DSTs: A Collaborative PTAC Project

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To support continued improvements in decision making, we'll provide an update to our Petroleum Technology Alliance Canada (PTAC) initiative: Review of Phase 2 ESA data from past drilling waste disposal locations to better understand the effectiveness of the Alberta Energy Regulator (AER) document "Assessing Drilling Waste Disposal Areas: Compliance Options for Reclamation Certification" (Compliance Options, AER 2014). North Shore and Waterline collaborated to determine if the Compliance Options: are appropriate as currently written; require adjustment to reduce false positive or negative triggers for Phase II ESAs; or are in need of other changes.

Stage 1 (Data Collection, Data Analysis and Draft Report) has been completed. Site data (Phase 1 and Phase 2 ESAs) from 1681 sites were reviewed which identified 510 candidate sites to evaluate. This process primarily identified that the salt calculation and default Drill Stem Test (DST) chloride concentration of 215,000 mg/L may be too conservative.

To provide more accurate DST calculations, Stage 2 is now in progress which involves geological database mining. Through collaboration with AER, 40,000 data points were assessed and preliminary results suggest the establishment of regional or formation specific default inputs, rather than the use of a single conservative default value.

The intent of this presentation is to provide insight and guidance on improving decision making with respect to evaluating drilling waste disposal risk. We'll provide an overview of the results and suggested recommendations to make the Drilling Waste Compliance Options more effective.

Jim Purves

Mr. Purves is a Professional Agrologist with over 25 years of experience in the environmental and agricultural industries. As a Technical Advisor, Mr. Purves provides technical support, senior report review as well as mentorship and staff training to his team members. His focus is on complex projects; mainly contaminated sites in the form of guideline modification, risk assessment and Subsoil Salinity Tool (SST). Mr. Purves' remediation and reclamation experience includes all aspects of the 'life cycle' approach from Phase 1, 2, and 3 ESAs, spill clean-up and restoration, reclamation, DSAs, and the implementation of various remediation techniques.

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