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Optimizing Site Locations to Reduce Long-Term Environmental Liabilities

Greg R. Potter

Sheila C. Duchek

SNC-Lavalin Inc.

Summary

When choosing a site location for a new project, site selection is typically based on land access, proximity to resources and other cost and revenue considerations. Historically, project site selection did not consider environmental liabilities and associated decommissioning and reclamation costs. These environmental liabilities and project closure costs can be significant, especially for a facility in place for decades to tens of decades.

When developing a new project, a site selection study is recommended. The goal of the site selection study is to rule out unfavourable sites and identify ideal locations. Project siting decisions are complex, having many (and often conflicting) factors and require a multidisciplinary approach. A decision analysis procedure facilitates a quantitative ranking of potential site locations. Outcomes of the decision analysis procedure is to determine an order of preference, ranking criteria and weighting factors.

SNC-Lavalin has evaluated and ranked potential salt storage and other industrial waste facilities based on land use, social, environmental, constructability, operational factors, brine disposal options, and cost. Information sources used to determine ranking criteria and evaluation include: publicly available data, reports, in-house expertise, and ongoing studies. The biggest difference in site rankings can typically be attributed to potential contamination and cost considerations. Whereas, the final selected site is preferred due to environmental and social considerations.

This presentation will be focused on providing guidance to industry environmental coordinators and project planning managers to introduce project planning strategies for limiting environmental liabilities, with the added benefit of proactively addressing environmental regulatory obligations.