

## Project Profile: Line 21 Decommissioning Plan

Client: Enbridge Pipelines Inc. (Enbridge)

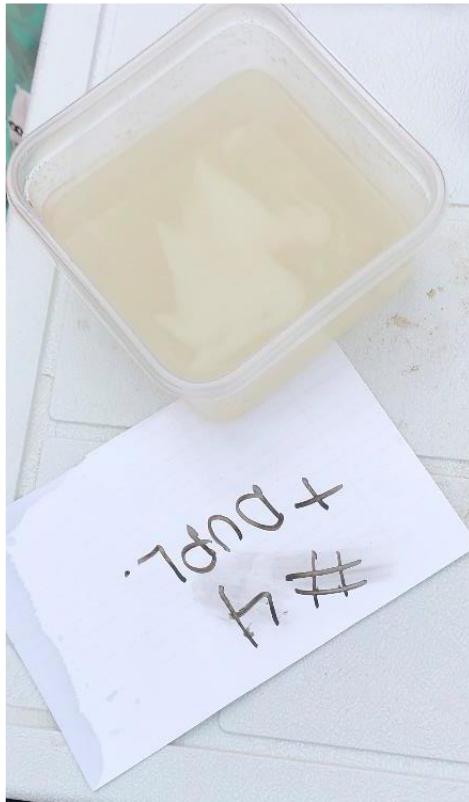
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In 2018 Enbridge decommissioned a 2.1 kilometre pipeline segment of Line 21 spanning under the Mackenzie River near Fort Simpson in the Northwest Territories. Plex founders were engaged by Enbridge to develop the Decommissioning Plan for the project.

The primary objective of the Decommissioning Plan was to develop the scope of work which met Enbridge's commitments to the National Energy Board, including:

- Engineering of an optimized Cleaning Program including an execution plan and QA/QC procedures to verify and evidence the pipeline cleanliness
- Optimization of field execution activities to maximize equipment utilization and prevent standby between cleaning and pipeline filling activities
- Engineering of a filling plan to fill approximately 2100 metres of the pipeline segment with engineered fill



The greatest project success was the pipeline Cleaning Program, that included the use of a combination of chemical cleaning and mechanical techniques, in order to achieve a target Total Petroleum Hydrocarbon Content (THC) limit less than 100 ppm. A comprehensive chemical analysis was completed on the samples collected during the cleaning process that confirmed the cleaning program was able to achieve a THC concentration of less than 25 ppm in the final rinse water batch.

Biological testing of the samples collected from the final batch confirmed that the decommissioned pipeline was successfully cleaned to a level that ensured no negative impacts would occur to the biology of the Mackenzie River or surrounding environment.