

## CARBON DIOXIDE STORAGE & INJECTION SYSTEM



Client: Air Liquide Canada (ALC) / Canadian Natural Resources Limited (CNRL)

Value: Confidential

Description: The carbon dioxide (CO<sub>2</sub>) storage and injection system is designed to store more than 300,000 pounds of liquid CO<sub>2</sub> and inject variable volumes of gaseous and liquid phase carbon dioxide into four remote tailings pipelines to adjust extraction system effluent pH and promote settlement in the tailings ponds downstream.

Scope: SDE was contracted by Air Liquide Canada to perform the process, structural, civil, mechanical, and electrical engineering services for a CO<sub>2</sub> storage and injection facility in Fort McKay, Alberta.

SDE performed a computer simulation of the process with VMGSim™ to check the heat and material balance, provided equipment specifications and detailed design of four equipment skids including a refrigeration system and all field piping. SDE designed the power distribution and instrumentation systems, the storage vessel foundations and site road access. SDE also provided commissioning plans and field support for start-up and acceptance testing.