

Solar Powered Free Product Recovery System



Project Profile

Two pipeline breaks resulted in soil and groundwater contamination and accumulation of free phase product at the water table surface, at a remote location in northeast BC. The Site was located in the ALR with a significant organic/peat layer at surface.

Issue

We measured up to 1m of free product in the monitoring wells. Options to remove free product included the use of Hydro Vac trucks (the site has access limitations), recovery using manual bailers (labour intensive) and construction of a multi-phase extraction system (no publically available utilities).

Solution

SynergyAspen designed, constructed and operated two solar powered free product recovery systems. Each system consists of a belt skimmer powered by 12 Volt batteries recharged by solar panels. Each system is equipped with two above ground storage tanks to store removed free product, a float level switch to prevent tank overfilling, a timer to control when the system would operate, and a temperature switch to turn the system off during cold weather. We installed all of this within a secondary containment. We can move the system on site between various monitoring and recovery wells.

Outcome

SynergyAspen designed, built and operated a solar powered free product recovery system. The system is environmentally sustainable, reliable, cost-effective, and low maintenance.