

## Remediation of a Former Oil Refinery Site



**TYPE OF CLIENT:**  
Petroleum Company

**COST (\$CAN):**

- < 500 K
- 0.5 – 1 M
- 1 – 5 M
- 5 – 10 M
- > 10 M

### BACKGROUND

The former refinery, covering an area in excess of 77 hectares, had been in operation for some 55 years. Following the dismantling of the refinery and storage installations, contaminated soil and sludge, as well as refinery wastes, were excavated and temporarily stockpiled. As Biogénie was involved in the final excavation procedures, we requested that samples of the contaminated material be sent to our laboratory in order to perform a treatability study.

### SOLUTION

On the grounds of the treatability study results, Biogénie proposed a guaranteed remedial solution based on the biological treatment of the contaminated material. The remedial strategy was based upon the application of an *ex situ* biological treatment process to the stockpiled material. Avoiding further displacement of the contaminated material was a key feature of the strategy providing substantial cost savings.

From a technical standpoint, customizing the selected biotreatment process was a challenge in itself when considering the sheer size of the project as well as the type of contaminants and material (heavy hydrocarbons in a clayey soil). The project was completed two years ahead of schedule, facilitating the sale of the property to a multinational petrochemical company.

### SERVICES

- Management and supervision of the excavation and temporary stockpiling of refinery wastes as well as contaminated soil and sludge;
- Confinement and recovery of free-phase product;
- Recovery and treatment of hydrocarbon-contaminated groundwater;
- Biological treatment of 800,000 tons of material consisting mainly of clayey soils impacted with heavy hydrocarbons.

Biogénie is proud of this achievement where our technical know-how, as well as our engineering and project management capabilities, were key to the success of this project.