



**Project :** Pipeline tunnel  
Montreal, (Quebec), Canada

**Client :** Petro-Canada

### Project description :

Petro-Canada wanted the ability to transfer products in either direction from its oil tanker docking facility on the St-Lawrence river to its storage tanks inside the refinery perimeter. This would allow for the transfer of crude petroleum from the ships to the tanks and the exportation of selected finished products in the opposite direction.

In response to this desire, four (4) pipelines, ranging in diameter from 12 to 20 inches, were constructed in priority with an allowance for another seven (7) supplementary pipelines to be constructed at a later date.

To accommodate the current and foreseen pipelines needs, a tunnel three (3) meters in diameter and 1.2 kilometres in length was excavated under a residential area between the river and the refinery.

Ultragen was awarded the mandate to design the tunnel and the initial 4 pipelines travelling through it. One of the key challenges was to accommodate for the thermal expansion of the warm pipes at either end of the 1.2 km tunnel.

## Refining



**Year of realization :** 2001  
**Project value :** 27 M\$

### Services offered by Ultragen :

- Feasibility study
- Cost estimate
- Project management
- Design of the 1.2 km tunnel
- 3D modeling and stress analysis for the 4 pipelines
- Design of all the piping supports
- Technical support throughout the construction phase

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