



OVERVIEW

At an operating manufacturing facility, free phase petroleum hydrocarbons were discovered underneath the facility. Soil concentrations of PHCs included:

- BTEX (maximum concentration of 5 µg/g)
- F1 & F2 (maximum concentration of 4,920 µg/g)
- F3 & F4 (maximum concentration of 44,000 µg/g)

SCOPE OF WORK

- Acquired all relevant permits to complete the remediation program
- Designed and optimized an *in-situ* program to maximize treatment efficiencies
- Implemented a program that minimized capital expenditures and infrastructure



THE VERTEX APPROACH

- Chemical oxidation and enhanced aerobic biodegradation
- Three applications
 - Under floor slab and footing
- Injection of chemical oxidant
 - 950 kg of RegenOx
- Injections completed using:
 - Horizontal & vertical wells
 - Direct placement

OUTCOME

- Over 7,000 L of oxidant solution delivered to impacted areas
- Operations not interrupted
- Remediation objectives met:
 - BTEX
 - F1 & F2
 - F3 & F4
- Free phase treated *in-situ*
- Record of Site Condition Obtained

