GHD Unpublished Site, British Columbia

Fossil Fuel Traps

Summary

Media:	Soil gas
Study Type:	Other
Technology:	Fossil fuel traps (accumulation)
Peer Reviewed:	No
Publication Date:	Not published

Study Description

General site description and conditions: Above ground release of approximately 190 cubic meters of crude oil to a pump station in British Columbia. The release resulted in impacts to the soil and groundwater within the pump station property.

Contaminants of concern: Light non-aqueous phase liquid (LNAPL)

Sampling frequency of contaminants of concern: Approximately semi-annual

Technology used: Fossil fuel traps

Remedial Phase

Used in assessment of LNAPL biodegradation, known as natural source zone depletion (NSZD), for evaluation as a potential basis for the long-term LNAPL management plan.

Outcome

Results from NSZD testing conducted to date (fossil fuel CO_2 trap testing and temperature profiling) indicate that LNAPL in the subsurface is actively degrading at an average rate of 1,000-4,000 U.S. gallons of LNAPL degraded per acre per year.

References

American Petroleum Institute (API), May 2017. Publication #4784 – Qualification of Vapor Phase-related Natural Source Zone Depletion Processes, 1st ed.

Cooperative Research Centre for Contaminated Site Assessment and Remediation (CRC CARE), August 2018. Technical Report 44: Technical Measurement Guidance for LNAPL Natural Source Zone Depletion.

ITRC, 2018. LNAPL Site Management: LCSM Evolution, Decision Process, and Remedial Technologies, LNAPL. Washington, D.C.: Interstate Technology & Regulatory Council. LNAPL Update Team.