

Project Dashboard

Baker Lake Hotspot Remediation Landfarm and Interceptor Trench (149364)

Proposal Status: Conformity Determination Issued

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Project Overview

Type of application: **Amendment**

Proponent name: Maurice Guimond

Company: Qulliq Energy Corporation

Schedule:

Start Date: 2020-10-01

End Date: 2025-07-31

Operation Type: Seasonal

Project Description:

Build and operate a landfarm to address historically contaminated soil in Baker Lake. The Hamlet of Baker Lake experienced several diesel fuel spills in the 70s and 80s that had never gotten cleaned up. Northern Canada Power Commission (NCPC) and the Ministry of Transport (MOT) occupied that area at the time. Fuel storage infrastructure and fuel handling practices were not to the standard we see today. QEC inherited the land and along with it the contaminated soil at the site. After several ESAs QEC conducted a Human Health Risk Assessment of the site and the results identified one spot (Hotspot) that contained levels and contaminants which would put humans at risk. We decided to address it immediately by the recommended method of landfarming the impacted material. The landfarm was constructed in September 2016. Additionally to prevent contamination from entering Baker Lake QEC proposes to install a barrier from the perma-frost to surface along the lake shoreline. There would be groundwater extraction wells where contaminated water could be drawn and filtered before decanting to the environment.

Summary of Modifications:

QEC owns and maintains a land-farm cell in Baker Lake. The land-farm is currently on the old Power Plant site and due to the proximity the site is an odour nuisance. For this reason, the hamlet has asked that we move the cell to a new site north, near the landfill far from the hamlet. The preferred site is adjacent to the landfill and is un-surveyed. QEC will ensure that the proper heavy equipment is secured so the contractor can carry out the work safely. The proponent will haul clean fill to the site to build the new berm walls. Then the liner shall be laid out evenly and tucked into the berm walls to prevent movement. The existing contaminated soil in the cell will be hauled to the new site and fill the newly constructed cell. The soil shall be placed loosely to facilitate aeration. The soil will be mixed with a fertilization agent to further facilitate remediation. •Cell size in new location must be at least 20m X 40m including berm walls •Space required in total to allow for fence, access and surrounding monitoring 30m X 50m •There is

clean fill to re-use for partial rebuild at existing site (Berm walls) •Earth movers to provide heavy equipment and operators to facilitate the move •QEC to provide all new materials required for rebuild

Personnel:

Persons: 3

Days: 6

Project Map

List of all project geometries:

ID	Geometry	Location Name
6350	polygon	Hotspot
6351	polygon	Landfarm
6352	polygon	Interceptor_Trench
6353	polygon	New project geometry

Planning Regions:

Kitikmeot

Affected Areas and Land Types

Municipal

Settlement Area

Keewatin Planning Region

Project Land Use and Authorizations

Project Land Use

Site Cleanup/Remediation

Temporary Structures

Licensing Agencies

DFO:

INAC:

GN-DOE:

GN-QEC:

NIRB:

NWB:

Other Licensing Requirements

No data found.

Material Use

Equipment

Type	Quantity	Size	Use
Excavator	1	1 meter bucket	Removal of contaminated soil, placement of clean backfill

30 mil HDPE liner	1000 M2	26 M X 18.6 M	Containment cell impervious liner and contaminated soil cover
2.4 M high chain link fence	1	26 M X 18. 6 M	Security fence to restrict access to landfarm cell
Rototiller	1	small hand driven	To till and aerate contained soil within cell during summer
40 mil HDPE liner	600 M2	300 M X 2 M	Liner for interceptor trench
Water filter system	1	3 M X 2.5 M X 2 M	Filter contaminated ground water

Fuel Use

Type	Container(s)	Capacity	UOM	Use
Gasoline	1	23	Liters	rototiller operation

Hazardous Material and Chemical Use

Type	Container(s)	Capacity	UOM	Use
No records found.				

Water Consumption

Daily Amount (m ³)	Retrieval Method	Retrieval Location
0	No water will enter or leave the containment area. A cover will be used over the cell to prevent meltwater from entering and contained moisture from escaping.	No water use during construction or operation of the landfarm

Waste and Impacts

Environmental Impacts

Positive impacts will be realized since the hotspot was identified as being potentially hazardous to human health. The contaminated soil in the area has been removed placed in an impervious containment cell and covered. Remediation of the soil will begin shortly after spring melt and continue throughout the summer. Attenuation of the contamination is predicted to last over a 3 year period bringing the level to below criteria for soil to be used industrially.

Waste Management

Waste Type	Quantity Generated	Treatment Method	Disposal Method
Overburden (organic soil, waste material, tailings)	350 M3	Nutrients to be added to impacted soil at construction time	Removal of oil impacted soil and replacement with clean fill