



## **NIRB Uuktuutinga Ihivriughikhamut #125545**

### **Baker Lake Hotspot Remediation Landfarm and Interceptor Trench**

**Uuktuutinga Qanurittuq:** New

**Havaap Qanurittunia:** Halumakhinnikmun

**Uuktuutinga Ublua:** 7/8/2020 3:31:52 PM

**Period of operation:** from 0001-01-01 to 0001-01-01

**Piumayaat Angirutinga:** from 0001-01-01 to 0001-01-01

**Havauhikhaq Ikayuqtinga:** NIRB info

Nunavut Impact Review Board

Box 1360 ( 20 Mitik)

Cambridge Bay Nunavut X0B 0C0

Canada

Hivayautit Nampanga:: (867) 983-4600, Kayumiktukkut Nampanga:: (867) 983-2594

# QANURITTUT

## Tukihiannaqtunik havaariyaumayumik uqauhiyun

**Qablunaatitut:** 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. 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

**Uiviititut:** N/A

**Inuktitut:** N/A

**Inuinnaqtun:** N/A

### Personnel

Personnel on site: 3

Days on site: 6

Total Person days: 18

Operations Phase: from 2020-06-29 to 2020-09-29

Operations Phase: from 2020-09-29 to 2025-07-29

Post-Closure Phase: from to

# Hulilukaarutit

Inigiya	Hulilukaarut Qanurittuq	Nunannga Qanurittaakhaanik	Initurlinga qanuritpa	Initurlinga utuqqarnitat unaluuniit Ingilraaqnitat Uyaranguqtut akhuurninnga	Qanitqiyauyuq qanitqiamut nunallaat kitulluuniit ahiruqtaliyainnit nuna
Hotspot	Landfarm	Municipal	N/A	N/A	Baker Lake
Landfarm	Landfarm	Municipal	N/A	N/A	Baker Lake
Interceptor_Trench	Other	Municipal	N/A	N/A	Baker Lake

## Nunaliin Ilauyun, Aviktuqhimayuniitunullu Ikayuuhiarunguyun

Nunauyuq	Atia	Timiuyuq	Upluani Uqaqatigiyaungmata
Information is not available			

# Angiuttauvaktunik

Naunaiqlugu nunanga talvani havauhikhaq ittuq:

Kivalliq

## Angiuttauvaktunik

Munariniqmut Ayuittiaqtuq	Angirutinga Qanurittuq	Tadja Qanurittaakhaanik	Ublua Tuniyauyuq/Uuktuqtuq	Umikvikhaa Ublua
Information is not available				

## Project transportation types

Transportation Type	Qanuq Atuqtauniarmangaa	Length of Use
Land		

## Project accomodation types

Nunauyuq

# Ihuaqutivaluin Atuqtauyukhan

Hanalrutit atuqtaunahuat (ukuallu ikuutat, pampiutainnik, tingmitinik, akhaluutinik, hunaluuniit)

Hanalrutit Qanurittuq	Qaffiuyut	Aktikkulaanga – Qanurittullu	Qanuq Atuqtauniarmangaa
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

## Qanurittuq Urhuqyuaq unalu Qayangnaqtut Hunavaluit Aturninnga

Qanurittuq urhuqyuaq hunavaluit aturninnga:	Urhuqyuaq Qanurittuq	Qaffiuyut qattaryut	Qattaryuk Aktikkulaanga	Atauttimut Qaffiuyut	Ilanga	Qanuq Atuqtauniarmangaa
Gasoline	fuel	1	23	23	Liters	rototiller operation

## Imaqmik Aturninnga

Ubluq qanuraaluk (m3)	Aturumayain imavaluin utiqtittagaani qanuq	Atulirumayain imavaluin utiqtittagani humi
0		

# Iqqakuq

## Ikkakunik Munakgiyauyunik

Havauhikhaq Hulilukaarut	Qanurittuq Iqqakut	Ihumagiyauyuq Qanuraaluktut Atuqtait	Qanuq Iqqakuurniarmangaa	Halummaqtirarnirutikhan piyutin
Site Cleanup/Remediation	Atakuin (halumaiqtun nunan, iqqakuuvaluillu uyaqqiqivingmin)	350M3	Removal of oil impacted soil and replacement with clean fill	Nutrients to be added to impacted soil at construction time

### Avatiliriniqmut Ayurhautingit:

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.

# **Additional Information**

**SECTION A1: Project Info**

**SECTION A2: Allweather Road**

**SECTION A3: Winter Road**

**SECTION B1: Project Info**

**SECTION B2: Exploration Activity**

**SECTION B3: Geosciences**

**SECTION B4: Drilling**

**SECTION B5: Stripping**

**SECTION B6: Underground Activity**

**SECTION B7: Waste Rock**

**SECTION B8: Stockpiles**

**SECTION B9: Mine Development**

**SECTION B10: Geology**

**SECTION B11: Mine**

**SECTION B12: Mill**

**SECTION C1: Pits**

**SECTION D1: Facility**

**SECTION D2: Facility Construction**

**SECTION D3: Facility Operation**

**SECTION D4: Vessel Use**

**SECTION E1: Offshore Survey**

**SECTION E2: Nearshore Survey**

**SECTION E3: Vessel Use**

**SECTION F1: Site Cleanup**

**SECTION G1: Well Authorization**

**SECTION G2: Onland Exploration**

**SECTION G3: Offshore Exploration**

**SECTION G4: Rig**

**SECTION H1: Vessel Use**

**SECTION H2: Disposal At Sea**

**SECTION I1: Municipal Development**

**Qanurittuq Ittunik Avatinga: Avatingalluanga**

**Qanurittuq Ittunik Avatinga: Inuuhimayunut Avatinga**

**Qanurittuq Ittunik Avatinga: Inungit-maniliurutingit Avatinga**

**Miscellaneous Project Information**

**Naunaiyainiq ukuninnga Ayurhautingit unalu Piumayaat Ikikliyuumiutinahuarutit**

**Tamatkiumayunik Ihuikgutivaktunik**

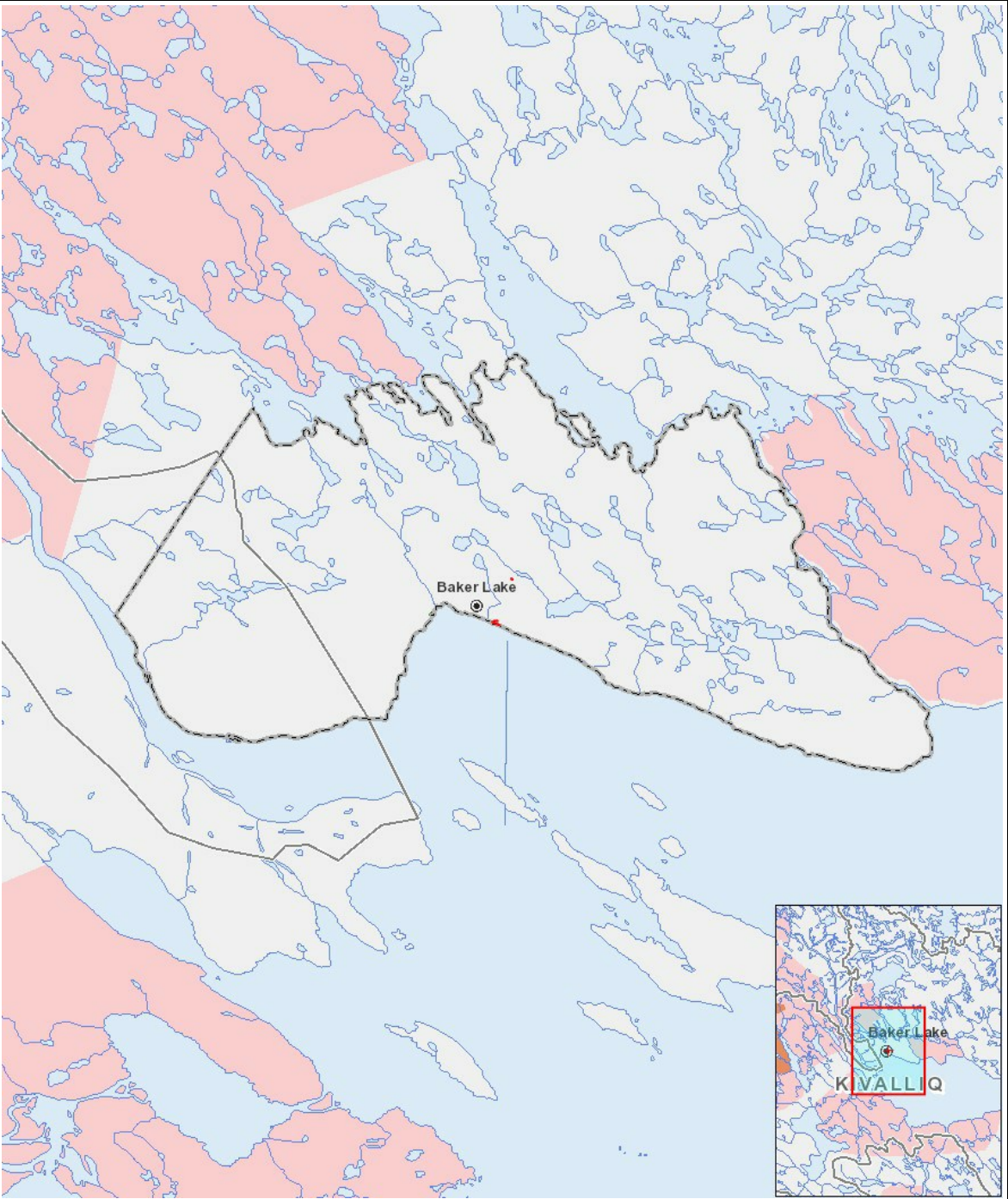
Impacts

Ilitariyauniq Avatiliriniqmut Ayurhautingit

		PHYSICAL	Designated environmental areas	Ground stability	Permafrost	Hydrology / Limnology	Water quality	Climate conditions	Eskers and other unique or fragile landscapes	Surface and bedrock geology	Sediment and soil quality	Tidal processes and bathymetry	Air quality	Noise levels	BIOLOGICAL	Vegetation	Wildlife, including habitat and migration patterns	Birds, including habitat and migration patterns	Aquatic species, incl. habitat and migration/spawning	Wildlife protected areas	SOCIO-ECONOMIC	Archaeological and cultural historic sites	Employment	Community wellness	Community infrastructure	Human health
Havakvinga																										
-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aulapkaininnga																										
-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Piiqtauniq																										
-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(P = Nakuuyuq, N = Nakuungittut unalu mikhilimaittuq, M = Nakuungittut unalu mikhittaaqtuq, U = Naluyauyuq)

Havaariyauyukhamut Nayugaa



List of Project Geometries

1	polygon	Hotspot
2	polygon	Landfarm
3	polygon	Interceptor_Trench
4	polygon	New project geometry