



## NIRB Uuktuutinga Ihivriughikhamut #125982

### Cambridge Bay Air Quality

<b>Uuktuutinga Qanurittuq:</b>	New
<b>Havaap Qanurittunia:</b>	Scientific Research
<b>Uuktuutinga Ublua:</b>	7/4/2024 11:33:26 AM
<b>Period of operation:</b>	from 2024-08-30 to 2027-08-30
<b>Havauhikhaq Ikayuqtinga:</b>	Emily Koide Polar Knowledge Canada (POLAR) 1 Uvajuq Road Cambridge Bay Nunavut X0B 0C0 Canada Hivayautit Nampanga:: 8673910285, Kayumiktukkut Nampanga::

# QANURITTUT

## Tukihiannaqtunik havaariyaumayumik uqauhiyun

**Qablunaatitut:** Overview: Polar Knowledge Canada and Environment and Climate Change Canada are proposing to install monitors to measure particulate matter (PM 2.5, PM 10 and black carbon) in the community of Cambridge Bay, Nunavut. Particulate matter can come from many sources in the community including road/construction dust, burning of diesel, and burning of the dump. Particulate matter, including black carbon, is of concern because it can contribute to negative health outcomes as well as climate change. Purpose: The purpose of this project will be to understand the levels and sources of particulate matter and black carbon in the community of Cambridge Bay, Nunavut. This information will help to assess whether these levels could be associated with any public health risks and develop options for mitigating emissions. Activities: The project will involve deploying small particulate matter sensors and black carbon sensors in strategic areas of the community. Quilliq Energy Corporation will help to install the sensors on top of the streetlights and remove them at the end of the project. A sensor will also be installed in the high school to monitor differences in indoor air quality. Timeline: This pilot project will span 3 years (2024 – 2027). It includes a minimum 2-year data collection period (2024-2026) and 1-year to analyze data and produce the project deliverables. Results: At the end of the project, the team will produce a report on findings, including options for mitigating emissions and exposure. These findings will be presented to community members in a results workshop where discussions can be held on results, next steps, and potential mitigation measures. The data generated from the project will also be shared with the Hamlet of Cambridge Bay to help determine potential emissions mitigation measures. Additionally, the team will be working with the high school to allow students to see the differences in particulate matter concentrations within their school and in different areas in their community. Should this pilot project be successful in Cambridge Bay the project could be duplicated/adapted for other arctic communities that are interested. Impacts: Due to the location of the project within a pre-disturbed area (within the community), the noiseless and small size of the instruments (approximately the size of a 1 litre Nalgene bottle), and the inaccessibility of the instruments on top of streetlights, there is unlikely to be any impacts to the environment, wildlife or people.

**Uviititut:** N/A

**Inuktitut:** N/A

**Inuinnaqtun:** Ukautait: Polar Knowledge Canadami ovalo Avatiligiit Hilat Aalangayulikiit Kanatami uktumayut ililutik kungiagutikhainik halumaituligutainik (PM 2.5, PM 10 ovalo Puyut) Ikaluktutiami, Nunavut. Halumailigit pilaaktut amigaitunit nunalaani, ilaayut apkotini hiugaliat, ikualaaktut ukhukyuat ovalo ikualaaktut kuviit. Halumaituligit ilaayut puyut ihumaalugilikit ilaa, ilaualaamata anialaagutainut ovalo hilat aalangugutait. Huliniaqtut: Hulinahuaqtut hamani hanayakhait kangikhinahualugit kanugitaakhaat ovalo nakitlu halumailigit ovalo puyut Ikaluktutiami, Nunavut. Hamna tuhagutikhait ikayuniaktut ikayugiaganik hapkoa kanugitaakhaat ilaayunit Inunut aniaktitailigiit ovalo hanalutik aalanut ihuakhilaagutainik puyunit. Havaniaktait: Hanayakhat ilauniaktut ililutik mikiyunik kimilguugutainik Ikaluktutiami. Quilliq Kuliligiit Kuapurisitkut ikayuniaktut iligitutainik kimilguugutait kaangani apkotini kuliit ovalo unguvklugit inikata hanayakhat. Kimilguutit iliyauniaktut Ilihakvim kungiagiaganik kanugitaakhaat iluani anikhaagutit. Ubluinik: Hamna hivulik hanayakhat uktuniaktut pingahunik ukiunik (2024mit – 2027mut). Ilauniaktut mikinikhaanut malguunik ukiunik katigitutait ukiunik (2024mit-2026mut) ovalo atauhikim ukiumik kimilguugutainit katigitutait ovalo hanalutik tunilaaktainik. Iniktigitutait: Inikata hanayakhat, havakatigiiktut hananiaktut tuhaktitakhainik nanihimayainik, ilaayut aalangugutainut ihuakhilaaktait puyut ovalo aktugutait. Hapkoa nanihimayait tuniyauniaktut nunakatigiiktunut ayoikhaitilutik katimayut nani ukakatiginiaktait iniktigitutainik, aipaanutlu piniaktait ovalo ihuakhautikhait naunaiyautainik. Katitikhimayut pihimayut hanayakhamit tuniyauniaktut, ilaukatigiyaanganik Hamletkunut Ikaluktutiami ikayugiaganik kanuk pilaaktait puyut ihuakhilaagutainik naunaiyautait. Ovalutauk, havakatigiiktut havaniaktut Ilihakvim pipkaiyaanganik ilihaktut takuyaanganik kanugitaakhaat halumailigit katitilikpaktut ilihakvim ovalo aalatkiinit ilihimayait Ikaluktutiami. Pigumik hamna hanayakhat nakuugumik Ikaluktutiami, hanayakhat aatjikutiluniaktait/atuliklugit aalani Ukiuktaktumi nunalaat uktugumayunut. Ikipinagutait: Naniiniagutait hanayakhat iluanik aktuktauhimaitumi (iluani Ikaluktutiaik), nipikangitut ovalo

mikiyut hanalgutit (haniani Ikaluktutiami), nipikangitut ovalo mikiyut (angitjutait 1litre hikulautait) ovalo aktuktaulaitjutainik hanalgutikhait kaangani kuliit, ikpinaktilaitut avatiligiyyinut, hugaanut ovaluniit Inunut.

**Personnel**

Personnel on site: 2

Days on site: 2

Total Person days: 4

Operations Phase: from 2024-08-30 to 2027-08-30

# Hulilukaarutit

Inigiya	Hulilukaarut Qanurittuq	Nunannga Qanurittaakhaanik	Initurlinga qanuritpa	Initurlinga utuqqarnitat unaluuniit Ingilraaqnitat Uyarannguqtut akhuurninnga	Qanitqiyauyuq qanitqiamut nunallaat kitulluuniit ahiruqtaliyainnit nuna
Air quality monitors within the boundary of Cambridge Bay	Scientific/International Polar Year Research	Commissioners	Within municipal limits of Cambridge Bay	N/A - will be installed in pre-disturbed area on buildings and light posts	Within Cambridge Bay

## Nunaliin Ilauyun, Aviktuqhimayuniitunullu Ikayuuhiarunguyun

Nunauyuq	Atia	Timiuyuq	Upluani Uqaqatigiyaungmata
Ikaluktuttiak	Angela Gerbrandt	Cambridge Bay Hamlet	2024-06-06

# Angiuttauvaktunik

Naunaiqlugu nunanga talvani havauhikhaq ittuq:

Angiuttauvaktunik

Munariniqmut Ayuittiaqtuq	Angirutinga Qanurittuq	Tadja Qanurittaakhaanik	Ublua Tuniyauyuq/Uuktuqtuq	Umikvikhaa Ublua
Nunavunmi Ihivriuqniqmut Timiqutigiyanga	NRI Research Permit - Physical / Natural Sciences Research	Not Yet Applied		

## Project transportation types

Transportation Type	Qanuq Atuqtauniarmangaa	Length of Use
Land	Travel by truck in community to install monitors	

## Project accomodation types

Alaanut,

# Ihuaqutivaluin Atuqtauyukhan

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

Hanalrutit Qanurittuq	Qaffiuyut	Aktikkulaanga – Qanurittullu	Qanuq Atuqtauniarmangaa
QEC Cherry Picker	1	2x4.5m	Install sensors on top of light posts

## Qanurittuq Urhuqyuaq unalu Qayangnaqtut Hunavaluit Aturninnga

Qanurittuq urhuqyuaq hunavaluit aturninnga:	Urhuqyuaq Qanurittuq	Qaffiuyut qattaryut	Qattaryuk Aktikkulaanga	Atauttimut Qaffiuyut	Ilanga	Qanuq Atuqtauniarmangaa
Information is not available						

## 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
Information is not available				

### Avatiliriniqmut Ayurhautingit:

Potential environmental impacts are very low as the monitors are small (approximately the size of a nalgene water bottle), do not emit sound, and will be placed out of reach on light posts and buildings. The monitors are also being placed within the community in pre-disturbed areas. Potential for positive impacts on air quality, community wellness and human health as the results workshop from this project will discuss with community members, KIA and the Hamlet about current air quality and mitigation measures to improve air quality in the community.

# **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**

Pre-disturbed area

### **Qanurittuq Ittunik Avatinga: Inuuhimayunut Avatinga**

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

This project is in response to community concerns with air pollution from dust and burning of the dump. The air quality monitors will help measure impacts from these activities and will aid in determining mitigation measures.

## **Miscellaneous Project Information**

### **Naunaiyainiq ukuninnga Ayurhautingit unalu Piumayaat Ikikliyuumiutinahuarutit**

### **Tamatkiumayunik Ihuikgutivaktunik**

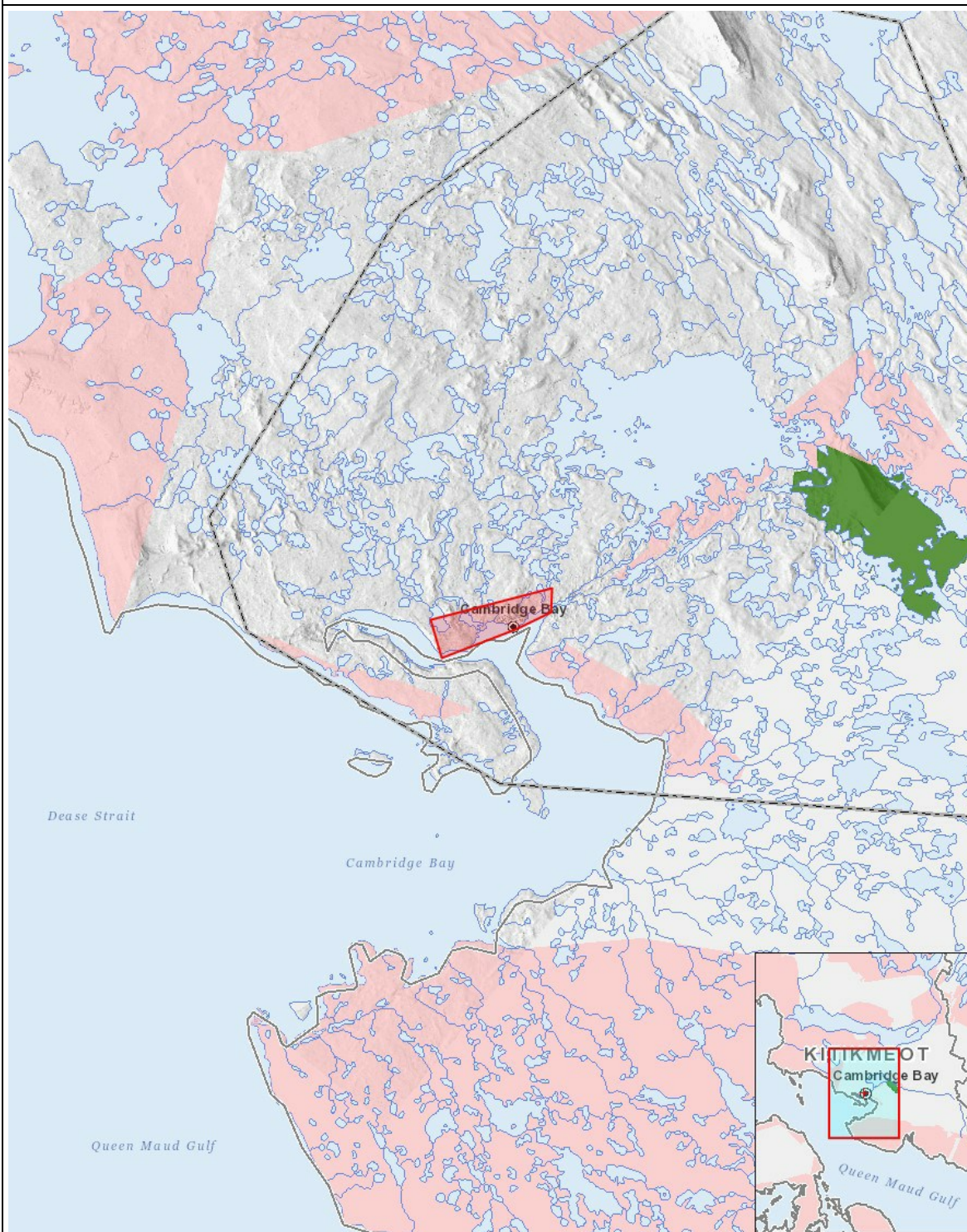
Impacts

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																									
Scientific/International Polar Year Research		-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-	-	-	-	-	P	-	P
Piiqtauniq																									
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

# Havaariyauyukhamut Nayugaa



## List of Project Geometries

1	polygon	Air quality monitors within the boundary of Cambridge Bay
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