Public Registry - Project Proposals

NPC 150457: Cambridge Bay Air Quality

Close

Proposal Status: Conformity Determination Issued

Overview Documents

Project Overview

Type of application: New

Proponent name:

Emily Koide

Proponent company:

Polar Knowledge Canada (POLAR)

Project Description:

Project: Black Carbon and Particulate Matter Monitoring 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. Sensors will be installed on top of the streetlights or on buildings/posts and remove them at the end of the project. A sensor will also be installed in the high school or community hall 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.

Project Schedule

Start Date:

2024-08-01

End Date:

2027-08-01

Project Map

List of project geometries:

Id Geometry Location Name
13204 polygon 8 air quality monitors within the boundary of Cambridge Bay

NPC Planning regions:

No Approved Plan

Project Land Use and Authorizations

Project Land Use:

Scientific Research

Licensing Agencies:

Nunavut Research Institute

Material Use

Equipment:

Type Quantity Type

Use

No data found

Fuel Use:

Type Container Capacity Use

No data found

Hazardous Material and Chemical Use:

Type Container Capacity Use

No data found

Water Consumption:

Daily Amount (m^2) Retrieval Method Retrieval Location

0

Waste and Impacts

Environmental Impacts:

No waste. 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.

Waste Management:

Waste Type Quantity Generated Treatement Method Disposal Method

No data found