



NIRB Application for Screening #126000

Inuit Qaujisarnirmut Pilirijjutit on Arctic Shipping Risks in Inuit Nunangat

Application Type: New

Project Type: Scientific Research

Application Date: 9/18/2024 1:09:00 PM

Period of operation: from 2022-04-01 to 2026-03-31

Project Proponent: Jackie Dawson
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Non-technical project proposal description

[illegible]

ajuiqhanirmik ajuiqhaqatigiikhutik. Qanuriniit Uqautiginikkut: Qanuriliningit naamainaqtut atuqtilugilu ajuiqhaviujut Arviani Mitimatalingmilu upalugaiqtaujuat ukiungani 2025. Hapkuat hulipkaidjutikhat hivulliuqtauniaqtut Inuit Inulrammiinit. Qanuriliningit uqautauniarmijurlu Nunavumi ikajuqtiriinik atuqtilugu havaakhaq.

Personnel

Personnel on site: 7

Days on site: 21

Total Person days: 147

Operations Phase: from 2022-04-01 to 2026-03-31

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
Pond Inlet - community-based sampling	Sampling sites	Municipal	N/A	N/A	We will be sampling the shoreline within the community and near the community (approximately 20km radius).
Arviat - community-based sampling	Sampling sites	Municipal	N/A	N/A	We will be sampling the shoreline within the community and near the community (approximately 20km radius).
Dundas Harbour (potential shore location)	Sampling sites	Crown	N/A	N/A	N/A
King William Island (potential shore location)	Sampling sites	Crown	N/A	N/A	N/A
Arctic Bay (potential shore location)	Sampling sites	Municipal	N/A	N/A	We will be sampling the shoreline within or near the community depending on where the ship goes.
Gjoa Haven (potential shore location)	Sampling sites	Municipal	N/A	N/A	We will be sampling the shoreline within or near the community depending on where the ship goes.
Cambridge Bay (potential shore location)	Sampling sites	Municipal	N/A	N/A	We will be sampling the shoreline within or near the community depending on where the ship goes.
Fort Ross (potential shore location)	Sampling sites	Crown	N/A	N/A	N/A
Resolute Bay (potential shore location)	Sampling sites	Municipal	N/A	N/A	We will be sampling the

location)					shoreline within or near the community depending on where the ship goes.
Devon Island (potential shore location)	Sampling sites	Crown	N/A	N/A	N/A
Prince Leopold Island (potential shore location)	Sampling sites	Crown	N/A	N/A	N/A
Kugluktuk (potential shore location)	Sampling sites	Municipal	N/A	N/A	We will be sampling the shoreline within or near the community depending on where the ship goes.
Grise Fiord (potential shore location)	Sampling sites	Municipal	N/A	N/A	We will be sampling the shoreline within or near the community depending on where the ship goes.
Smith Sound (potential shore location)	Sampling sites	Crown	N/A	N/A	N/A
Iqaluit (potential shore location)	Sampling sites	Municipal	N/A	N/A	We will be sampling the shoreline within or near the community depending on where the ship goes.
Kimmirut (potential shore location)	Sampling sites	Municipal	N/A	N/A	We will be sampling the shoreline within or near the community depending on where the ship goes.
Kinngait (potential shore location)	Sampling sites	Municipal	N/A	N/A	We will be sampling the shoreline within or near the community depending on where the ship goes.
Resolution Island (potential shore location)	Sampling sites	Crown	N/A	N/A	N/A

Hantzsch Island (potential shore location)	Sampling sites	Crown	N/A	N/A	N/A
Tookoolito Inlet (potential shore location)	Sampling sites	Crown	N/A	N/A	N/A

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Pond Inlet	Eric Soloman	Ikaarvik	2024-06-18
Pond Inlet	Shelly Elverum	Ikaarvik	2024-06-18
Pond Inlet	Justin Milton	Ikaarvik	2024-07-03
Pond Inlet	Michael Milton	Ikaarvik	2024-09-16
Arviat	Kukik Baker	Aqqiumavvik Society	2024-09-17
Arviat	Shirley Tagalik	Aqqiumavvik Society	2024-08-15
Pond Inlet	Jamie Enook	ECCC	2022-09-20
Arviat	Jimmy Muckpah	Aqqiumavvik Society	2024-09-17

Authorizations

Indicate the areas in which the project is located:

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Qikiqtani Inuit Association	QIA Land Use Exemption Certificate– QX-2210 (Jennifer Provencher)	Active	2022-06-01	2025-12-31
Nunavut Research Institute	Scientific Research License Number 05 006 24R-M	Active	2024-02-19	2024-12-31

Project transportation types

Transportation Type	Proposed Use	Length of Use
Water	Ship and local boats	

Project accomodation types

Other,

Material Use

Equipment to be used (including drills, pumps, aircraft, vehicles, etc)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Air sampling array	4	<1m	Optical particle counters, air filtration units and depositional dust gauges to quantify the concentration and size distribution of particulates and allowing for the assessment of black carbon concentration.
Water filters	4	0.5m	Customised filtration system which sample a ship's uncontaminated sea water supply (ambient near-surface waters pumped through the hull). The filtration system has an inline flow meter to record the volume of water filtered and three sequential filters (i.e., mesh size 300, 100 and 50 microns).
Manta net	2	2m x 0.6m	Sampling using manta nets to identify and quantify the concentration of anthropogenic particulates and microplastics in surface waters.
Niskin water sampler	4	0.6m	Collect small water samples (50mL) for environmental DNA(eDNA) meta-barcoding.
Remotely Operated Vehicle (ROV)	2	0.5m x 0.4m	Take surface water samples using syringe sampler and take underwater photographs vessel hulls to determine the extent of biofouling.

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Information is not available						

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
0		

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Information is not available				

Environmental Impacts:

Waste: We expect waste to be minimal, limited to small amounts of garbage from sampling equipment. Sampling equipment will be unpacked in the South to reduce waste brought to Nunavut. Any waste produced while sampling will be packed out and transported South for disposal. Wildlife disturbance: All sampling activities will be accompanied by local residents and/or vessel operators trained in the local marine and terrestrial wildlife, in order to reduce any potential disturbances. Environmental disturbance: All research staff are trained in sampling protocols in order to minimize any potential disturbance to the environment. Physical samples taken will be small, and we will not be taking more than is needed for laboratory analysis. Local residents: Our research is being conducted in partnership with local organizations and relies on IQ in order to be of maximum benefit to local residents. Before any research activities are undertaken, we will consult with our Inuit partners, local hunters, and local residents to ensure our activities will not disrupt any traditional practices (e.g. hunting activities).

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

Description of Existing Environment: Physical Environment

Description of Existing Environment: Biological Environment

Description of Existing Environment: Socio-economic Environment

Miscellaneous Project Information

Identification of Impacts and Proposed Mitigation Measures

Waste: We expect waste to be minimal, limited to small amounts of garbage from sampling equipment. Sampling equipment will be unpacked in the South to reduce waste brought to Nunavut. Any waste produced while sampling will be packed out and transported South for disposal. Wildlife disturbance: All sampling activities will be accompanied by local residents and/or vessel operators trained in the local marine and terrestrial wildlife, in order to reduce any potential disturbances. Environmental disturbance: All research staff are trained in sampling protocols in order to minimize any potential disturbance to the environment. Physical samples taken will be small, and we will not be taking more than is needed for laboratory analysis. Local residents: Our research is being conducted in partnership with local organizations and relies on IQ in order to be of maximum benefit to local residents. Before any research activities are undertaken, we will consult with our Inuit partners, local hunters, and local residents to ensure our activities will not disrupt any traditional practices (e.g. hunting activities).

Cumulative Effects

Impacts

Identification of Environmental Impacts

	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
Construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Operation																									
Sampling sites		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	P	P	-	-
Decommissioning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Location



List of Project Geometries

1	polyline	Potential ship route
2	polyline	Potential ship route
3	polyline	Potential ship route
4	polyline	Potential ship route
5	polyline	Potential ship route
6	point	Pond Inlet - community-based sampling
7	point	Arviat - community-based sampling
8	point	Dundas Harbour (potential shore location)
9	point	King William Island (potential shore location)
10	point	Arctic Bay (potential shore location)

11	point	Gjoa Haven (potential shore location)
12	point	Cambridge Bay (potential shore location)
13	point	Fort Ross (potential shore location)
14	point	Resolute Bay (potential shore location)
15	point	Devon Island (potential shore location)
16	point	Prince Leopold Island (potential shore location)
17	point	Kugluktuk (potential shore location)
18	point	Grise Fiord (potential shore location)
19	point	Smith Sound (potential shore location)
20	point	Iqaluit (potential shore location)
21	point	Kimmirut (potential shore location)
22	point	Kinngait (potential shore location)
23	point	Resolution Island (potential shore location)
24	point	Hantzsch Island (potential shore location)
25	point	Tookoolito Inlet (potential shore location)