

[illegible]

Personnel

Personnel on site: 7

Days on site: 15

Total Person days: 105

Operations Phase: from 2025-06-01 to 2027-12-31

Activités

Emplacement	Type d'activité	Statut des terres	Historique du site	Site à valeur archéologique ou paléontologique	Proximité des collectivités les plus proches et de toute zone protégée
Zone Arviat	Researching	Municipal	The hamlet is the second largest community in Nunavut with 2864 residents, and is located on the western shores of Hudson Bay, approximately 200km north of Churchill, Manitoba. Arviat remains closely tied to its traditional Inuit roots, and in addition to having a vibrant arts industry is also becoming a centre of mining training and employment for the Kivalliq Region.	Parks Canada:Arvia'juaq (Sentry Island 61°10'N 093°51'W), an island in Hudson Bay, is located close to Arviat. It is a National Historic Site of Canada and a Caribou Inuit (Paallirmiut) summer camp site. Qikiqtaarjuk, is a small peninsula, just north of Arviat, that faces Arvia'juaq. Like Arvia'juaq, Qikiqtaarjuk contains many Paallirmiut artifacts, and both are considered ritual, spiritual, and sacred sites.	Sites we are interested in would fall within a 30km radius of the Arviat hamlet; mostly in the North and West of Arviat, along the existing road network.

Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Arviat	Mayor Joe Savikataaq Jr	Hamlet of Arviat	2015-02-24
Arviat	Nicole Issakiark	Arviat Hunters and Trappers Organization	2025-02-14
Rankin Inlet	Luis Manzo	Kivalliq Inuit Association	2025-02-12
Rankin Inlet	Andre Aokaut	Kangiqliniq Hunters and Trappers	2025-02-12

Autorisations

Indiquez les zones dans lesquelles le projet est situé:

Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Institut de recherche du Nunavut	Scientific Research Licence: request for renewal of 03_009_24R-M	Active		

Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Land	truck and ATV	

Project accomodation types

Collectivité

Utilisation de matériel

Équipement à utiliser (y compris les perceuses, les pompes, les aéronefs, les véhicules, etc.)

Type d'équipement	Quantité	Taille – Dimensions	Utilisation proposée
Light drilling machine	1	0.5X0.5m	Drilling permafrost cores at depth up to 3 meters
Drill	1	3X3m	Large permafrost drilling equipment, typically used for installing piles
Geophysical equipment	1	1X1m	System is operated on the ground by team on foot, for electrical resistivity
Drone	1	1x1	Study site overview , digital elevation model, and thermal imagery
car	2	3x2	Travelling around Rankin Inlet and Arviat communities
ATV	4	1.5x1.5	Travelling around Rankin Inlet and Arviat communities
Light drilling machine (battery)	1	2x2m	Drilling permafrost cores at depth up to 3 meters, borehole equipped with ground temperature sensors
Geophysical equipment	1	0.30x3 m	System is operated on the ground by team on foot, for electromagnetic surveys

Décrivez l'utilisation du carburant et des marchandises dangereuses

Décrivez l'utilisation de carburant :	Type de carburant	Nombre de conteneurs	Capacité du conteneur	Quantité totale	Unités	Utilisation proposée
Gasoline	fuel	2	20	40	Liters	engines

Consommation d'eau

Quantité quotidienne (m3)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
0		

Déchets

Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Researching	Déchets combustibles	50kg	Municipal	NA
Researching	Eaux grises	100L per person per day (=10500L)	Municipal	NA
Researching	Déchets non combustibles	50Kg	Municipal	NA
Researching	Eaux usées (matières de vidange)	100L per person per day (=10500L)	Municipal	NA

Répercussions environnementales :

Environmental impact is estimated to be very low, and no long-term environmental impacts are expected. The proposed work will not have any important impact on wildlife or on the major habitats that support the wildlife. No temporary camp will be installed. All work will be conducted based out of Arviat with surveys, samplings and instrumented site locations accessed daily by truck or ATVs and at a walking distance from the ATV/road network. Specific sites would be revised based on field conditions and interest by the community. There will be no operations within Inuit Owned Lands. No helicopter would be used.

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 de l'environnement existant : Environnement physique

Arviat lies within the Western Churchill Province of the Canadian Shield and the continuous permafrost zone. Arviat is located on an esker ridge along the southern shore of the harbour. Other surficial geology units include marine deposits, which includes raised beach ridges, thin sheets of sand representing emergent coastal reworking of marine mud and silty sand, and abandoned tidal flats with peat cover. The terrain is slightly rolling with a general increase in elevation westward away from the coast. Although the townsite on the esker ridge is about 10 m above mean sea level, the built-up area is fairly flat. An extensive shallow wetland covers a large part of the subtle depression between the two esker ridges. Much of the wetland has been capped with gravel pads for construction of housing and infrastructure.

Description de l'environnement existant : Environnement biologique

Description de l'environnement existant : Environnement socio-économique

The hamlet is the second largest community in Nunavut with 2864 residents, and is located on the western shores of Hudson Bay, approximately 200 km north of Churchill, Manitoba. Arviat remains closely tied to its traditional Inuit roots, and in addition to having a vibrant arts industry is also becoming a centre of mining training and employment for the Kivalliq Region. Arvia'juaq (Sentry Island 61°10'N 093°51'W), an island in Hudson Bay, is located close to Arviat. It is a National Historic Site of Canada and a Caribou Inuit (Paallirmiut) summer camp site. Qikiqtaarjuk, is a small peninsula, just north of Arviat, that faces Arvia'juaq. Like Arvia'juaq, Qikiqtaarjuk contains many Paallirmiut artifacts, and both are considered ritual, spiritual, and sacred sites.

Miscellaneous Project Information

Community engagement events (meeting and radio show) took place in Arviat in February 2025, followed by a virtual meeting with the Hamlet of Arviat. Good feedback was received with no concerns on the project.

Identification des répercussions et mesures d'atténuation proposées

In addition to the Environmental impact section, below are specific impact related to the usage of machines: -Light Drilling machine for permafrost coring: Disturbance to the surrounding vegetation would be minimized by laying plywood and/or a tarp on the ground surface. Shallow drilling sometimes requires the use of water, but all water is returned to the ground, and nothing is added to the water. Permafrost drill holes would be filled with sand and the vegetation cover kept and put back in place to avoid tripping and thawing of the ground. Monitoring stations (PVC pipes about 3' height could be installed in the holes and

removed at the end of the project). - Ground geophysics: These surveys are conducted by one to three people (tools are either stationary on the ground or moved by walking along transects). The survey devices use electrical or electromagnetic sensing technology to produce an image of the ground below the surface. Surveys are non-invasive and involve no disturbance of the land. -All drone flights would be conducted outside of aerodrome areas as required by Nav Canada for a pilot with a basic certification. A pilot with a basic certification to fly this type of drones (more than 250 grams and less than 25 kg) will be part of the field team. All flights would also be conducted to avoid any disturbance with caribou and we would make sure to stay away from any wildlife or private cabins.

Répercussions cumulatives

Impacts

Identification des répercussions environnementales

		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																										
-		-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Exploitation																										
Researching		-	-	M	-	-	-	-	-	-	-	-	-	-		M	-	-	-	-		-	P	-	-	-
Désaffectation																										
-		-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = Positive, N = Négative et non gérable, M = Négative et gérable, U = Inconnue)

Site du projet



Liste des géométries de projet

1	polygon	zone_rankin
2	polygon	Project hull
3	polygon	Zone Arviat
4	point	Arctic Haven wilderness lodge/Ennadai Lake
5	point	Henik Lake Adventure/Nueltin Lake camp
6	point	Kasba Lake Lodge/Tabane Lake outpost
7	point	Henik Lake Adventure/Henik Lake camp
8	point	Henik Lake adventure/Kuuglik Bear camp
9	point	Dubawnt camp/tukto lodge (south Dubawnt)
10	point	Dubawnt camp/tukto lodge (north Dubawnt)
