



## **Demande de la CNER faisant l'objet d'un examen préalable #125562**

### **Quarry sites KM 8,15,16,18,20**

**Type de demande :** New

**Type de projet:** Pits and Quarries

**Date de la demande :** 9/10/2020 11:57:22 AM

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

**Autorisations proposées:** from 0001-01-01 to 0001-01-01

**Promoteur du projet:** Randy Mercer  
Government of Nunavut  
P.O. Box 490  
Rankin Inlet Nunavut X0C 0G0  
Canada  
Téléphone :: 867-645-8115, Télécopieur :: 867-645-8143





## 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
KM8 boundary	Quarry/Borrow pit	Commissioners	KM 8 has no prior site history except for 4 private cabins within the boundary	There is no known Archeological/Paleontological value within the boundary. However, 75 metres south of the boundary contains a grave. The engravings mentioned the person died in 2016. Its assumed that is when the grave was created.	KM8 is located approximately 8 kilometres north-west from the community of Rankin Inlet. There is no protected sites except for the grave mentioned above within the boundary.
KM15 boundary	Quarry/Borrow pit	Commissioners	KM15 had no prior use.	There is no known Archeological/Paleontological value within the boundary	KM15 is located approximately 15 kilometres north-west from the community of Rankin Inlet. There is no protected sites within the boundary.
KM16 boundary	Quarry/Borrow pit	Commissioners	KM 16 has no prior site history except for 1 private cabin within the boundary	There is no known Archeological/Paleontological value within the boundary	KM16 is located approximately 16 kilometres north-west from the community of Rankin Inlet. There is no protected sites within the boundary.
KM20 boundary	Quarry/Borrow pit	Commissioners	KM20 had no prior use.	There is no known Archeological/Paleontological value within the boundary	KM20 is located approximately 20 kilometres north-west from the community of Rankin Inlet. There is no protected sites within the boundary.
KM18 boundary	Quarry/Borrow pit	Commissioners	KM 18 has no prior site history .	There is no known Archeological/Paleontological value within the boundary	KM18 is located approximately 18 kilometres north-west

					from the community of Rankin Inlet. There is no protected sites within the boundary.
--	--	--	--	--	--

**Engagement de la collectivité et avantages pour la région**

<b>Collectivité</b>	<b>Nom</b>	<b>Organisme</b>	<b>Date de la prise de contact</b>
Rankin Inlet	Ashley Ymana	The Municipal Corporation of the Hamlet of Rankin Inlet	2020-08-17
Rankin Inlet	Hamlet council	The Municipal Corporation of the Hamlet of Rankin Inlet	2016-04-01

## Autorisations

Indiquez les zones dans lesquelles le projet est situé:

Kivalliq

### Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Government of Nunavut, Community Government & Services	All quarry sites are located on untitled Municipal land which is administered by CGS. CGS is the applicant on behalf of the Hamlet of Rankin Inlet.	Active		
Hamlets and Municipalities	The Hamlet council was made aware of these sites in 2016 and no objections. Ashley Ymana, Acting Senior Administrative Officer approved CGS to proceed with this application on September 9,2020.	Active	2020-09-09	

### Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Land	Mobile equipment, such as loaders and dump trucks will use an existing road to access all quarry sites	

### 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
CAT Loader	1	5.7m x 2.7m x 1.5m	excavate quarry material
Dump Truck	1	8m x 2.5m x 3.4m	haul quarry material
Track Excavator	1	10m(L) x 3.2m (H) x 3.2m (W)	excavate quarry material
Screener	1	14.2m(L) x 4m(H) x 4.9m (W)	Screen undesirable aggregate and large boulders

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
Diesel	fuel	1	535	535	Liters	fuel tank that attached to the CAT loader. Diesel will be taken from the community fuel station.
Diesel	fuel	1	567	567	Liters	fuel tank that attached to the Dump Truck. Diesel will be taken from the community fuel station.
Diesel	fuel	1	600	600	Liters	fuel tank that attached to the Track Excavator. Diesel will be taken from the community fuel station.
Diesel	fuel	1	276	276	Liters	fuel tank that attached to the Screener. Diesel will be taken from the community fuel station.

Consommation d'eau

Quantité quotidienne (m3)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
246	Hamlet water trucks will be used to take water from the Williamson lake pump house.	Williamson Lake pump house located on lot 546 plan 2542, which takes its water from the Nippisar Lake.

# Déchets

## Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Quarry/Borrow pit	Mort-terrain (sol organique, déchets, résidus)	100,000 m3	Overburden will be stockpiled for potential future use.	No additional treatment procedures

## Répercussions environnementales :

The natural vegetation such as moss and other arctic plants on the surface will be disturbed or destroyed within the excavation area within quarry boundaries. This is unavoidable due to the nature of quarry operations. Additional environmental impacts and the mitigation measures are outlined the Quarry Management, Spill Contingency and the dust mitigation measures Plans attached to this application.

# **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**

The Quarry Management Plan attached to this NIRB application goes into details related to quarry operations.

**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**

All sites have similar terrain features and contain vegetation typically found in Nunavut such as moss and other arctic plants. KM8 is relatively flat but does contain a natural esker located along the eastern boundary. This esker is where most of the construction grade aggregate will come from. The other areas within boundary contain pit-run, sand, and other finer material that have limited uses and will be stockpiled. There are 4 recreational cabins within the boundary, which will be relocated. 75 metres south of the boundary there is a grave. Precautions outlined in the Quarry Management Plan will be enforced to ensure this grave is not disturbed during operations. KM 15 is relatively flat and is virtually undisturbed because the Diane road does not reach this site. There is a small pond with a diameter of 98 metres within the boundary. The marine biology and depth are not known. A quarry study indicated that it may be a thermokarst pond, but this is speculation. A 31 metre buffer zone between the pond and excavation will be enforced. There are two larger waterbodies located north and south of KM15. The northern waterbody has a diameter of 573 metres and the one to the south has a diameter of 371 metres. KM15 closest boundary line to either of these waterbodies is 70 metres. KM16 sits atop an elevated natural esker. The Diane road runs through the middle of KM16. There is also one 1 recreational cabin within the boundary. Besides the road and cabin, KM16 remains undisturbed and contains natural vegetation. There are large waterbodies to the east and west of the KM16 boundary. The eastern waterbody has diameter of 371 metres and the western waterbody has a diameter of 440 metres. KM16 closest boundary line to these waterbodies is 100 metres. KM18 has the Diane road running through the middle of the quarry boundary. Besides the Diane road, KM18 is untouched and contains natural vegetation. There are smaller waterbodies located to the north and south of the boundary. The northern waterbody has a diameter of 245 metres and the southern one has diameter of 200 metres. The closest boundary line to either of these water bodies is 40 metres. KM20 also has the Diane road going through the northern end of the boundary line. Besides the Diane road, this area remains undisturbed. There is a small waterbody within the boundary. It is 280 metres long and 54 metres wide. The marine biology and depth are unknown. Analyzing the satellite imaging, this waterbody seems very shallow, which assumes it is not fish bearing. 31 metre buffer zone between the waterbody and extraction will be maintained. KM20 is an elevated area that contains high grade gravel material. This is the ideal location for the Hamlet of Rankin Inlet. There is no evidence of ice lensing, ground or rock instability and seismicity within all sites. There are no heritage sites, sport and commercial fishing areas, migration routes, protected wildlife areas or sites of cultural or historical significance (besides recreational cabins), or areas of natural beauty within or around any of the quarry boundaries. Surface and bedrock geology, permafrost, and sediment and soil quality for any site is not known.

### **Description de l'environnement existant : Environnement biologique**

All sites contain vegetation typically found in Nunavut such as moss and other arctic plants. KM15 had sand cranes and other waterfowl observed approximately 500 metres south-east of the boundary and KM20 had animal tracks near the boundary but no visible wildlife noted. There are no wildlife or bird migration routes nor is there any species of concern within any boundary.

### **Description de l'environnement existant : Environnement socio-économique**

The quarry sites names were derived from their approximate distance from the center of Rankin Inlet. For example, KM8 is 8 kilometres from Rankin Inlet. KM8 and 16 contain recreational cabins within their boundaries, which will be relocated prior to quarry operations. KM8 has a grave 75 metres south of the boundary. Precautions for the grave are outlined in the Quarry Management Plan. There are no archaeological or culturally significant sites within each quarry site. There is no subsistence harvesting, tourism, trapping or guiding operations in each quarry. Since the closest quarry site is 8 kilometres from Rankin Inlet, the effect of the extraction process on the well-being of the residence will be minimal.

### **Miscellaneous Project Information**

Additional information can be seen in the Dust Management, Spill contingency and Quarry Management plans.

### **Identification des répercussions et mesures d'atténuation proposées**

The local Hamlet will be the administrator of all sites. They will be used by both the Hamlet and the public. The Hamlet will issue quarry permits to the public and these quarry permits will come with the following conditions: No extraction of aggregate will occur within 31 metres of any waterbody. The contractor will inform the Hamlet the date and time when they plan to extract the material to ensure the Hamlet, if deemed necessary, supervise the extraction of aggregate. The extraction of aggregate and their surroundings, is done in an environmentally sound manner that is satisfactory to the Hamlet and/or NIRB. Excavation is not to occur outside of the established quarry boundary. Stockpiling of aggregate will be located at least 31 metres from any waterbody to avoid water siltation and obstruction. Access to and from the quarry site will only be done through designated roads. Once extraction of aggregate is complete then the contractor will remove all types of their equipment from the site and slops grade reduction with use of unsuitable stockpiles and uncrushed rocks. The contractor will follow the quarry plans. There will be no petroleum stored on site, but the equipment used in the extraction of aggregate such as loaders and excavators do have diesel tanks attached to them. The Hamlet and private contractors will be required to follow the Spill contingency plan.

### **Répercussions cumulatives**

Since the Diane road already exists and services recreational traffic to and from Rankin Inlet. Any added cumulative effects from quarry operations relating to human activity will be minimal.

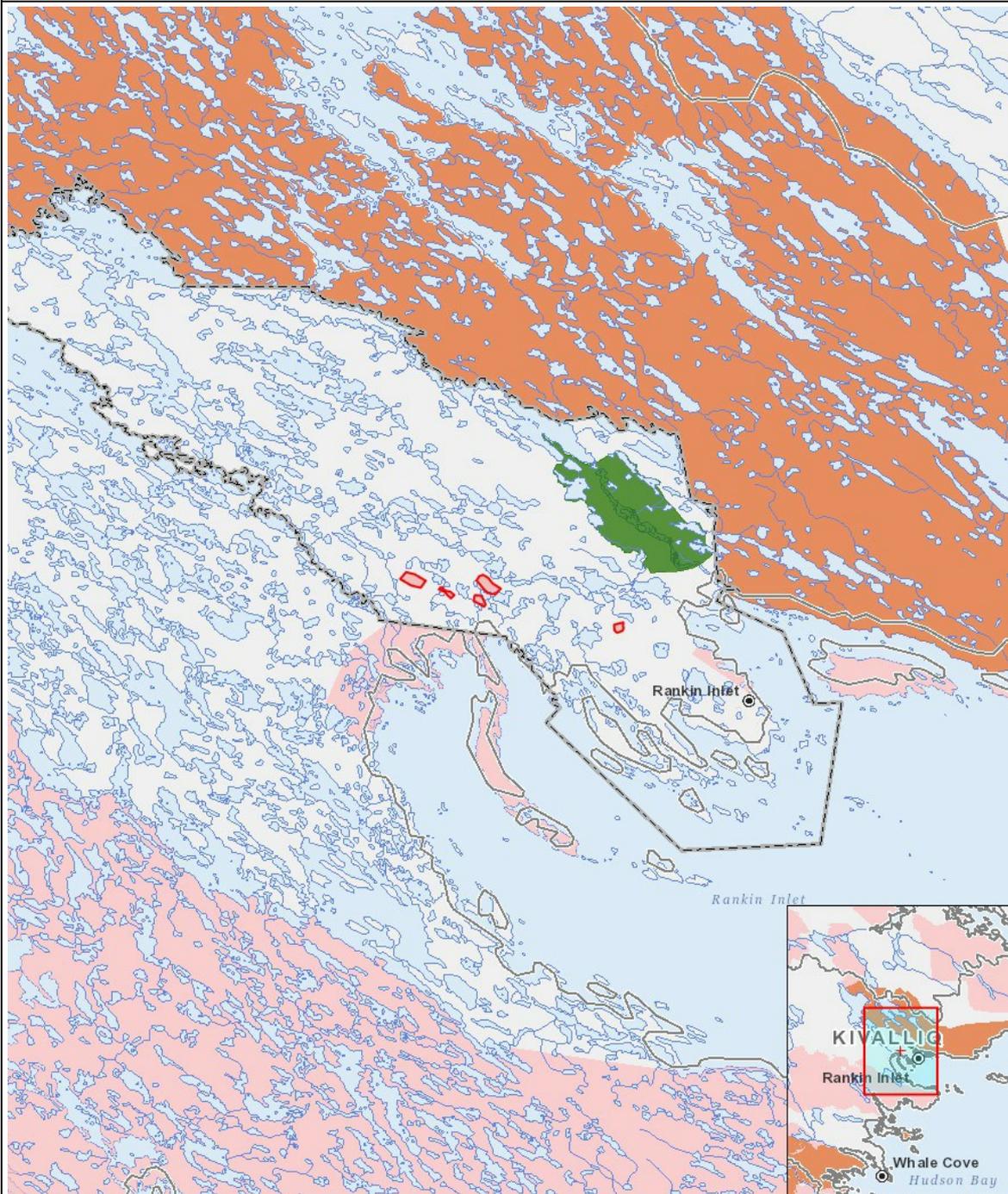
# Impacts

## 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
<b>Construction</b>																									
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Exploitation</b>																									
Quarry/Borrow pit	-	U	U	-	-	-	M	U	U	-	-	M	M	-	-	-	-	-	-	-	P	P	P	-	-
<b>Désaffectation</b>																									
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

## Site du projet



## Liste des géométries de projet

1	polygone	KM8 boundary
2	polygone	KM15 boundary
3	polygone	KM16 boundary
4	polygone	KM18 boundary
5	polygone	KM20 boundary