



**ᓄᓇᓂᓪᓴ ᐃᓕᓂᓕᓴᓂᓄᓪᓇ ᓅᓂᓴᓴᓂᓄᓪᓇ ᐃᓂᓴᓴᓂᓄᓪᓇ ᓄᓄᓂᓂᓂᓄᓪᓇ #126018**  
**Kugaaruk Sealift Improvements Project**

**ᐃᓂᓴᓴᓂᓄᓪᓇ ᓄᓄᓂᓂᓂᓄᓪᓇ:** New

**ᐱᓕᓴᓴᓂᓄᓪᓇ ᓄᓄᓂᓂᓂᓄᓪᓇ:** Coastal Infrastructure

**ᐃᓂᓴᓴᓂᓄᓪᓇ ᐃᓂᓴᓴᓂᓄᓪᓇ:** 12/10/2024 2:37:07 PM

**Period of operation:** from 2025-08-28 to 2050-10-26

**ᐱᓕᓴᓴᓂᓄᓪᓇ:** Richard Hoos  
Tetra Tech Canada Inc.  
1000, 885 Dunsmuir Street  
Vancouver British Columbia V6C 1N5  
Canada  
ᐃᓂᓴᓴᓂᓄᓪᓇ: 604 813 4952, ᓄᓄᓂᓂᓂᓄᓪᓇ:

ፍጹሙ ጋር ለሥራ ለመገባደግ ምክር ቤቱ ለሥራ ለመገባደግ

ᖃᓕᓗᓂᓂᓐ: The Hamlet of Kugaaruk has determined that the community's existing barge landing area, including the barge landing ramp and cargo laydown/storage area need to be expanded to accommodate future anticipated Hamlet sealift needs. In particular, the barge landing expansion project is proposed to include: Barge Landing Area Expansion of the existing barge landing area (0.76ha) to 45m wide to accommodate two (2) barges concurrently. Boulder and bedrock blasting in the lower intertidal zone, followed by rockfill and gravel placement during low tide conditions. Sealift Laydown Area-Expansion of the existing on-land sealift laydown area from its current size (0.5 ha) to 1.0 ha.-Drainage improvements to the perimeter of the current sealift laydown area. Excavation and bedrock blasting as necessary, followed by gravel and rockfill placement to create the expanded level sealift laydown area. Sealift Laydown Area Widening of the existing access road from 8 m to 10 m. Improving existing steep vertical grades (approx.. 10-12% grades) along approximately 100 m. of the existing access road, Excavation and bedrock blasting as necessary, followed by gravel and rockfill placement. Additional proposed Infrastructure (Optional) Security Office insulated with Generator, powered heating and lighting. Security fence surrounding laydown area (320 m). Road and caution signage in both English and Inuktitut.

▷Δ&NƆ°: Le hameau de Kugaaruk a déterminé que l'aire d'atterrissage actuelle des barges de la communauté, y compris la rampe d'atterrissage des barges et l'aire de dépôt et d'entreposage des marchandises, doit être agrandie pour répondre aux besoins futurs prévus du hameau en matière de transport maritime. En particulier, le projet d'agrandissement de l'aire d'atterrissage des barges est proposé pour inclure :Expansion de l'aire d'atterrissage des barges existante (0,76 ha) à 45 m de large pour accueillir deux (2) barges simultanément.Dynamitage des rochers et du substrat rocheux dans la zone intertidale inférieure, suivi de la mise en place de l'enrochement et du gravier dans des conditions de marée basse. Zone de dépôt du transport maritime-Extension de la zone de dépôt terrestre existante de sa taille actuelle (0,5 ha) à 1,0 ha.-Améliorations du drainage du périmètre de la zone de dépôt actuelle du transport maritime. Excavation et dynamitage du substrat rocheux au besoin, suivis de la mise en place de gravier et d'enrochement pour créer la zone de dépôt de transport maritime élargie. Zone de dépôt du transport maritimeÉlargissement de la route d'accès existante de 8 m à 10 m.Amélioration des pentes verticales abruptes existantes (environ 10 à 12 % des pentes) le long d'environ 100 m de la route d'accès existante,Excavation et dynamitage du substrat rocheux si nécessaire, suivis de la mise en place de gravier et d'enrochement. Infrastructure supplémentaire proposée (facultatif)Bureau de sécurité isolé avec une génératrice, chauffage et éclairage alimentés.Clôture de sécurité entourant la zone de dépôt (320 m).Signalisation routière et d'avertissement en anglais et en inuktitut.

[illegible]

## Personnel

Personnel on site: 15

Days on site: 240

Total Person days: 3600

Operations Phase: from 2025-06-27 to 2026-10-27

Operations Phase: from 2025-08-28 to 2050-10-26

Post-Closure Phase: from to

Λ Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω

<b>ᐱᑦ</b>	<b>ᖃᓄᕛᑦᑐᒥᑦ ᐱᑦᑎᐱᖃᑦᑭᑦᐱᑦᐸᑦ</b>	<b>ᑯᔨᑦ ᓄᐱᑦᑲᑦᑭᑦ</b>	<b>ᑐᐱᑳᑦᑲᑦ ᓄᐱᑦᐸᑦ ᖃᓄᖃᑦ ᐱᑐᑳᑳᑳᑳᑳᖃᑦᑲᑦᑲᑦᑲᑦᑲᑦᑲᑦ</b>	<b>ᕛᑦᑲᑦᑭᑦᑲᑦᑲᑦᑲᑦᑲᑦᑲᑦ ᕛᑦᑲᑦᑲᑦ ᐱᑦᑲᑦᑲᑦᑲᑦᑲᑦᑲᑦᑲᑦ ᑭᕛᑦᑲᑦᑲᑦᑲᑦᑲᑦᑲᑦᑲᑦ</b>	<b>ᖃᓂᑦᑲᑦᑲᑦᑲᑦᑲᑦ ᓄᐱᑦᑲᑦᑲᑦᑲᑦᑲᑦ ᐱᑦᑲᑦᑲᑦ ᑲᑶᑦᑲᑦᑲᑦᑲᑦᑲᑦᑲᑦ ᑲᑶᑦᑲᑦ</b>
expanded area footprints	Harbour infrastructure	Municipal	Existing sealift barge ramp with existing sealift laydown area	Previously disturbed site, no archaeological potential	1.6 kilometres south of Kugaaruk
expanded area footprints	Offshore Infrastructure (port, break water, dock)	Municipal	Existing Sealift barge ramp and Sealift cargo area will be expanded to address ongoing and future supply needs of the Hamlet of Kugaaruk. Aggregates from the community quarry/borrow site will be hauled to the project area and placed in areas designated for expansion,	this is a previously disturbed site and is not anticipated to have no archaeological potential	1.6 km south of Kugaaruk

[illegible]

<b>ᑭᓇᕐᒋᔪᅆ</b>	<b>ᐱᏁ</b>	<b>ᖃᑐᗦᐱᐳᖅᓂᓄᓈᕐᒋᔪᅆ</b>	<b>ᖅᓴᓯ<sup>c</sup> ᑐᗦᖅᓂᐳᐸᐸᐸᐼᐳᓈᕐᒋᔪᅆ</b>
dūᖅᓴᖅ	Michelle Byers MBA	SAO	2024-10-30

$\mathbb{C} \Delta^{\text{a}} \dot{\rho}^c \wedge J^{\text{a}}_{\text{a}} \triangleright \dot{n} \triangleleft^{\text{a}} \Gamma^{\text{ab}} C \triangleright \rho L \dot{\nu}^c$

<p> <b>ሲብላንታሪ  ቁጥጥር/ፍቃድ  ሲብላንታሪ  ፍቃድ/ፍቃድ  ቤት  ፍቃድ/ፍቃድ  ሲብላንታሪ  ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ</b> </p>	<p> <b>ፍቃድ/ፍቃድ  ሲብላንታሪ  ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ</b> </p>	<p> <b>ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ</b> </p>	<p> <b>ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ</b> </p>	<p> <b>ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ  ፍቃድ/ፍቃድ</b> </p>
ፍቃድ/ፍቃድ ፍቃድ/ፍቃድ ፍቃድ/ፍቃድ ፍቃድ/ፍቃድ ፍቃድ/ፍቃድ	Letter of Advice	Not Yet Applied		
ፍቃድ/ፍቃድ ፍቃድ/ፍቃድ ፍቃድ/ፍቃድ ፍቃድ/ፍቃድ ፍቃድ/ፍቃድ	Land Use Permit	Not Yet Applied		
ፍቃድ/ፍቃድ ፍቃድ/ፍቃድ ፍቃድ/ፍቃድ ፍቃድ/ፍቃድ ፍቃድ/ፍቃድ	Approval	Not Yet Applied		

### Project transportation types

Transportation Type	Construction Method	Length of Use
Water	expansion of the sealift landing ramp will be conducted on land or in the dry during low tide conditions	
Land	all Project work will be conducted on land or in the dry during low tide conditions	

### Project accomodation types

ප්‍ර. 56

[illegible][illegible]

AL<sup>5b</sup> ◀<sup>5b</sup> C ▶<sup>5b</sup> L<sup>5b</sup> ◀<sup>5b</sup>

<b>ᐅᓪᓂ ᑕᑭᓪᓂᐅᓄᓪᓂᐅᓄᓪᓂᐅᓄᓪᓂ</b>	<b>ᖃᓄᓪᓂ ᐃᒋᓪᓂᐅᓄᓪᓂᐅᓄᓪᓂᐅᓄᓪᓂ</b>	<b>ᓇᔨᓪᓂ ᐃᒋᓪᓂᐅᓄᓪᓂᐅᓄᓪᓂᐅᓄᓪᓂ</b>
0	No water will be used for the construction of this expansion Project	Not Applicable

$$\Delta^b C d \zeta \rho \sigma \Delta^c \sigma^{\zeta b}$$

ᐱᓕᓂᐸᓚᓴᓄᐅᔪᒫᓯᑦ ᐱᓕᓂᐸᓚᓴᓄᐅᓂᐸᑦᑐᑦ	ᖃᓄᐸᑦᑐᑦ ᐸᑦᑐᑦ	ᖃᓄᓂᓯ ᐸᑦᑐᑦ ᓴᖃᓯᐸᓂᐸᑦᑐᓴᓴᓄᐅᓂᐸᑦ	ᖃᓄᖃᖃ ᐸᑦᑐᑦᑐᓂᐸᑦᑐᑦ	ᓴᓴᒻᒪᖃᖃᓴᓄᓂᐸᓂᐸᑦᑐᑦ
Harbour infrastructure	ᐸᑦᑐᑦ ᐸᐸᐸᓂᐸᓄᐅᔪᓂᖃᑦᑐᑦ	10 cubic metres over 2 years	all combustible wastes will be transported to the hamlet landfill site for disposal	none required
Harbour infrastructure	ᐸᑦᑐᑦ ᐸᐸᐸᓂᐸᓄᐅᔪᓂᖃᓯᓕᑐᑦ	0.5 cubic metres	waste electrical wire will be returned to the Hamlet for re-use	None required
Harbour infrastructure	ᖃᓄᖃᓕᓂᓂᖃᖃ	240 liters	Porta Potties or Hamlet facilities will be used. all sewage will be transported to the Hamlet sewage lagoon	None required

$\Delta^{\epsilon} \Gamma \triangleright C^c \supset C$      $\Delta^b \supset^{\epsilon b} C \triangleright L \nabla^c$

Positive impacts will be achieved for the residents of the Hamlet of Kugaaruk as the sealift expansion project will permit an increase in the volume and variety of cargos that can be offloaded on an annual basis. A locally negative/non mitigable impact will occur to the small area of benthic intertidal marine habitat at the end of the current barge ramp, due to burial of this habitat by fill and aggregate material used to widen the end of the barge ramp. Negative/mitigable potential impacts on fish will be mitigated by conducting all potential in-water work by conducting all work "in the dry" during low tide conditions .

# **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**

The Hamlet of Kugaaruk has determined that the community's existing barge landing area, including the barge landing ramp and cargo laydown/storage area need to be expanded to accommodate future anticipated Hamlet sealift needs. In particular, the barge landing expansion project is proposed to include: Barge Landing Area Expansion of the existing barge landing area (0.76ha) to 45m wide to accommodate two (2) barges concurrently. Boulder and bedrock blasting in the lower intertidal zone, followed by rockfill and gravel placement during low tide conditions. Sealift Laydown Area-Expansion of the existing on-land sealift laydown area from its current size (0.5 ha) to 1.0 ha.-Drainage improvements to the perimeter of the current sealift laydown area. Excavation and bedrock blasting as necessary, followed by gravel and rockfill placement to create the expanded level sealift laydown area. Sealift Laydown Area Widening of the existing access road from 8 m to 10 m. Improving existing steep vertical grades (approx.. 10-12% grades) along approximately 100 m. of the existing access road, Excavation and bedrock blasting as necessary, followed by gravel and rockfill placement. Additional proposed Infrastructure (Optional) Security Office insulated with Generator, powered heating and lighting. Security fence surrounding laydown area (320 m). Road and caution signage in both English and Inuktitut.

## **SECTION D2: Facility Construction**



Construction of the sealift expansion facilities will involve the hauling of aggregate materials from the existing community quarry/borrow site and the placement, leveling and compaction of this material in the designated areas to complete the planned expansion of the sealift barge ramp and associated sealift cargo storage area.

#### **SECTION D3: Facility Operation**

the expanded facilities will continue to be operated by assigned Hamlet personnel as per the current approach

#### **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**

the barge ramp expansion will permit two barges to offload their cargos concurrently and to reduce the total time for offloading cargo

#### **SECTION H2: Disposal At Sea**

No disposal at sea will occur in relation to this sealift expansion project

#### **SECTION I1: Municipal Development**

#### **ᐱᓄᓇ ᐱᓇᐱᓄᓇ ᐱᓄᓇ ᐱᓄᓇ ᐱᓄᓇ ᐱᓄᓇ**

Kugaaruk is characterized by coastal mountains and well-vegetated lowlands with several lakes, rivers, and pondsthroughout the region, which provide important habitat for a variety of plants and animals<sup>2</sup>. Land-fast lead systems are areas of separated land-fast ice and pack ice and can be found throughout this region. Overall, Arctic temperatures are increasing and recently much of Nunavut experienced unseasonably warm summer temperatures<sup>3</sup>. Residents are also experiencing milder winters and fewer extreme cold temperatures. Due to glacial retreat in Kugaaruk, the land is rebounding to its former height, resulting in what appears to be declining sea levels.

#### **ᐱᓄᓇ ᐱᓇᐱᓄᓇ ᐱᓄᓇ ᐱᓄᓇ ᐱᓄᓇ ᐱᓄᓇ**

The wildlife economy plays an important role in Kugaaruk, with many residents supporting themselves by hunting, fishing, trapping, and gathering. Community members also participate in wage-based economic

[illegible]

### Miscellaneous Project Information

The Sealift expansion project involves the hauling of aggregate materials to the existing sealift barge ramp and associated cargo laydown area. Primary mitigation measures to be employed will include: dust control through the application of water as needed from a water truck; all in-water work will be conducted in the dry during low tide conditions to minimize impacts on fish. Blasting of bedrock at the end of the existing barge ramp will be conducted in the dry during low tide conditions in conformance with DFO guidelines; all fuel will be loaded into construction equipment at the Hamlet and not at the construction site to minimize the potential for a fuel spill to occur at the construction site.

this project involves the expansion of the existing sealift facilities to accommodate the growing future community supply needs. no cumulative effects are anticipated to occur as a result of this projec

## Impacts

$\mathbb{A}^1 \times \mathbb{A}^1 \xrightarrow{\sim} \mathbb{A}^1 \times \mathbb{A}^1$

[illegible]

( $P = \langle b \rangle_{\mathcal{A} \cap \mathcal{C}}$ ,  $N = \langle b \rangle_{\mathcal{A} \cap \mathcal{C}}$ ,  $M = \langle b \rangle_{\mathcal{A} \cap \mathcal{C}}$ ,  $U = \langle b \rangle_{\mathcal{A} \cap \mathcal{C}}$ )

1	polyline	expanded area footprints
2	polyline	expanded area footprints
3	polyline	expanded area footprints
4	polyline	expanded area footprints

- |   |          |                          |
|---|----------|--------------------------|
| 1 | polyline | expanded area footprints |
| 2 | polyline | expanded area footprints |
| 3 | polyline | expanded area footprints |
| 4 | polyline | expanded area footprints |