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NPC File No: 150863
NIRB File No: 25YN061

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10 November 2025

**Re: Crown-Indigenous Relations and Northern Affairs Canada Information Request Response for the
Kivalliq-Baffin Connector Fibre Project Horizontal Directional Drilling Engineering Support Program
Nunavut Impact Review Board Public Comment Period (25YN061)**

Dear Richard and Amir,

1 Project Overview

Dynamic Ocean Consulting Ltd. (Dynamic Ocean) has been retained by the Government of Nunavut – Department of Transportation and Infrastructure Nunavut (GN-TIN) as the regulatory specialist to support the permitting for the Kivalliq-Baffin Connector (KBC) Fibre Optic Cable Project (the KBC Fibre Project). The KBC Fibre Project is has four landings as below (depicted in Appendix A (Figure A-1)):

- Three landings on Baffin Island’s southern coast (Iqaluit, Kimmirut, Kinngait | Qikiqtani Region).

¹ This IR is addressed to Richard Bingley as that is who signed the CIRNAC IR; however, it is acknowledged that Muhammad Arslan (muhammad.arslan@rcaanc-cirnac.gc.ca) and David Abernethy (david.abernethy@rcaanc-cirnac.gc.ca) were referenced as contacts. Muhammad and David have been included in cc.

- One Landing on Southampton Island (Coral Harbour [Salliq] | Kivalliq Region).

The KBC Fibre Project will connect to a Branching Unit (BU) in Nunavik waters, northwest of Salluit (Nunavik), which was completed as a component of Phase 2 of the Kativik Regional Government (KRG) Eastern Arctic Underwater Fibre Optic Network (EAUFON) Project (EAUFON Project).

Prior to finalization of the detailed design phase of the KBC Fibre Project, a Horizontal Directional Drilling (HDD) Engineering Support Program (the KBC HDD Engineering Support Program) is required at each of the marine landings. The KBC HDD Engineering Support Program will be carried out by Worley Canada Services Ltd (Worley Consulting).

The KBC Fibre Project is considered transboundary as it has components in both the Nunavut Settlement Area (NSA) and the Nunavik Marine Region (NMR). However, the requirement for HDD is exclusive to the NSA and will occur in all communities with a marine landing; Coral Harbour (Salliq), Iqaluit, Kimmirut and Kinngait.

The intention of the KBC HDD Engineering Support Program is to assess seabed and subsurface (soil, rock, groundwater and permafrost) conditions to support the detailed design phase of the KBC Fibre Project. The KBC HDD Engineering Support Program will be composed of four program categories as summarized below:

- Geotechnical Program.
- Geophysical Program.
- Topographical Program.
- Biological Program.

For a detailed description of the surveys involved in each program, see Section 3.1 (Table 3-1) in the NIRB Application Letter (Dynamic Ocean, 2025b).

2 Information Request Response

2.1 Background

The KBC HDD Engineering Support Program Nunavut Impact Review Board (NIRB) application was submitted on 08 August 2025 (Dynamic Ocean, 2025b). The application was accepted as complete on 07 October 2025 (NIRB, 2025a), and the screening assessment pursuant to Section 87 of the *Nunavut Planning and Project Assessment Act* was initiated. The Public Comment Period occurred over a 21-day Public Comment Period from 07 October 2025 to 28 October 2025. Subsequently, several Authorities Having Jurisdiction (AHJs, see below) submitted an Information Request (IR) which were referred to the GN-TIN on 30 October 2025 (NIRB, 2025b):

- Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC), 28 October 2025 (CIRNAC, 2025).
- Environment and Climate Change Canada (ECCC), 29 October 2025 (ECCC, 2025).
- Transport Canada (TC), 28 October 2025 (TC, 2025).

2.2 Letter Intention

This letter supports the GN-TIN's response to CIRNAC. The CIRNAC IR is provided in Appendix B.

The KBC HDD Engineering Support Program acknowledges that CIRNAC is the AHJ for pertinent legislation as below:

- *Territorial Lands Act* and Territorial Land Use Regulations for activities occurring below the Ordinary High-Water Mark (OHWM).

The KBC HDD Engineering Support Program's Environmental Management Plan (EMP, (Dynamic Ocean, 2025a)) details the monitoring and mitigation measures that will be employed to minimize negative effects to sediment and water quality and waste management. Additional mitigation measures are detailed for local consultation and the incorporation of community knowledge.

2.3 Response

We appreciate CIRNAC taking the time to support the NIRB during the Public Comment Period and have provided our responses to the IR in Table 2-1. However, we do feel that there may be some confusion in terms of understanding the scope of activities between the KBC HDD Engineering Program and the future KBC Fibre Project, in terms of geotechnical drilling and Horizontal Directional Drilling (HDD).

Dynamic Ocean will reach out directly to ECCC in advance of the NIRB Public Comment Period for these components to confirm that the concerns of ECCC are appropriately addressed.

Table 2-1: Crown-Indigenous and Northern Affairs Canada Information Requests

ID No.	CIRNAC Information Request	CIRNAC Recommendation	GN TIN Response
Sediment and Water Quality			
Reference - The KBC HDD Engineering Support Program EMP (Dynamic Ocean, 2025a). - Table 5-3: Sediment and Water Quality.			
1	The Project involves Horizontal Directional Drilling (HDD) entry points and associated works near the shoreline. The Environmental Management Plan references Canadian Council of Ministers of the Environment (CCME) Water Quality Guidelines and states that turbidity exceedances are not anticipated, citing a 30 m compliance monitoring zone and the relatively small drill-head footprint (≈150 mm). However, the Plan does not clearly outline how potential sediment or drilling fluid releases from land-based activities will be monitored and managed.	CIRNAC recommends that the Proponent consider implementing best management practices, Including: - Establishing background water quality conditions before drilling and documenting monitoring results regularly. - Tracking borehole fluid returns continuously to detect losses that could cause sediment release.	<u>Background Turbidity</u> Marine-based planned to occur during an iced ocean state and therefore, turbidity monitoring is not practical. Further, the near shore drilling is not expected to result in sediment mobilization to the ocean. As summarized in the EMP (Section 4.3), Worley Consulting has performed multiple drilling programs in southern Canada, which did not result in visible turbidity plumes. Further to this, it is highly unlikely that if a turbidity plume did occur, it would exceed CCME WQG guidelines (CCME, 2002) or result in an occurrence that would be considered a deleterious substance (pers. comm. Victoria Burdett-Coutts, MSc, RPBio). Further to this, given the remote locations of the Program it is highly improbable there is a risk for contaminated sediment. During all drilling programs, there will be a local observer available who is dedicated to documenting environmental conditions.

ID No.	CIRNAC Information Request	CIRNAC Recommendation	GN TIN Response
			<u>Tracking Borehole Fluid Returns</u> Drill fluids will not be re-circulated. Any drill returns reaching the surface will be directed away from the drill rig. Borehole fluid usage will be tracked based on water input per borehole, drawn from 1,000-liter totes. The total volume can be estimated by the number of totes used for each borehole. The drilling mud used for the KBC HDD Engineering Support Program is likely to be one of two as below: • NewZan D (powdered). • Matex DD1200 (liquid). NewZan D (also referred to as DRILLZAN D) powdered drill mud is considered environmentally friendly because its main active ingredient is a xanthan gum biopolymer, which is biodegradable and non-toxic². Matex DD1200 drill mud system, which includes products like DD 2000 and torqueless lubricant, is marketed as environmentally friendly (American West Drilling Supply, 2025). Therefore, it is not expected there will be negative effects to the surrounding environment due to the drilling activity.

² NewZanD SDS (noted its Australian, but the standards are similar for SDS requirements: <https://aplng.com.au/wp-content/uploads/2024/07/NEWZAN-D-SDS.pdf>).

ID No.	CIRNAC Information Request	CIRNAC Recommendation	GN TIN Response
Waste Management			
Reference - The KBC HDD Engineering Support Program EMP (Dynamic Ocean, 2025a). - Table 5-10: Waste Management.			
2	The Project adopts a “pack in, pack out” approach for equipment and materials, including segregation and labeling of wastes, returning drill cuttings to boreholes, and using biodegradable fluids, while sewage will be managed through existing facilities. However, the application lacks detailed provisions for waste management, as it does not identify designated reception facilities for solid waste streams, specify handling and segregation protocols.	CIRNAC recommends the Proponent considers: - Storing wastes in designated areas away from waterbodies in line with relevant authorizations. - Containing and stabilizing drilling fluids and cuttings, and confirming disposal pathways for residual materials.	Acknowledged. <u>Waste Storage</u> We appreciate the recommendations, however GN-TIN and Dynamic Ocean are of the professional opinion that mitigation measures already documented are appropriate for waste management. Please see Section 5.3.11 (Table 5-11 (Waste Management)) of the EMP (Dynamic Ocean, 2025a). Storage of waste will include properly sealed and labeled containers which will be transported to the appropriate disposal facilities if required. The employed procedures will prevent waste from entering the environment. <u>Containing & Stabilizing Drilling Fluids</u> Standard fuels such as hydraulic oil and gasoline will be used for the drill rig and Herman Nelson heaters, and these will be properly contained. Two types of drill mud will be utilized: NewZan D (powdered) and Matex DD1200 (liquid).

ID No.	CIRNAC Information Request	CIRNAC Recommendation	GN TIN Response
			See Comment No. 1 for information in the drill muds expected to be used.
Consultation with Interested Parties			
Reference - The KBC HDD Engineering Support Program EMP (Dynamic Ocean, 2025a). - Table 5-5: Wildlife and Migratory Bird Management. - Table 5-7: Local Support and Harvesting.			
3	CIRNAC recommends that the Proponent continue consulting with the Municipality of Resolute Bay and any other relevant organizations or individuals regarding the project proposal. As part of these consultation activities, several issues should be considered, including, but not limited to: - Incorporation of Inuit Qauijimajatuqangit (IQ) and Community Knowledge, in addition to scientific ways of knowing into project activities. - Mitigation measures to prevent any disturbance to wildlife and the environment. - Mitigation measures to prevent disturbance to sites of cultural, archaeological, and/or environmental significance. - Training and employment opportunities for Inuit and community members; Procurement opportunities for local and Inuit-owned businesses. - Planning efforts for the closure of the existing municipal solid waste facility; and, Regular updates on the status of project activities.		Acknowledged. GN-TIN will assume CIRNAC is referring to the communities of Coral Harbour (Salliq), Kinngait, Kimmirut and Iqaluit and not Resolute Bay, and that the last bullet is in reference to updates on the HDD Engineering Support Program. <u>Inuit Qauijimajatuqangit (IQ) and Community Knowledge</u> GN-TIN is committed to continued engagement and collaboration with the municipalities of Coral Harbour (Salliq), Kinngait, Kimmirut and Iqaluit, the HTA, the guardians, the QIA, and stakeholders throughout the KBC HDD Engineering Support Program. As described in Section 5.3.7 (Table 5-7 (Local Support and Harvesting)) of the EMP (Dynamic Ocean, 2025a), consultation with respective communities will be undertaken to collect available IQ and inform the KBC HDD Engineering Support Program activities.

ID No.	CIRNAC Information Request	CIRNAC Recommendation	GN TIN Response
			<u>Wildlife and Environment</u> GN-TIN will work collaboratively with the community to develop and implement mitigation measures to avoid or minimize any disturbance to wildlife and the environment. Mitigation measures for wildlife disturbance are described in Section 5.3.5 (Table 5-5 (Wildlife and Migratory Bird Management)) of the EMP (Dynamic Ocean, 2025a), which outlines the requirement for wildlife safety training and specifically discusses a prohibition to damaging or disturbing wildlife habitat (Mitigation No. WLMB7). <u>Archaeological Concerns</u> GN-TIN will work collaboratively with the community to develop and implement mitigation measures to avoid or minimize any disturbance to culturally or archaeologically sensitive sites. GN-TIN is in communication with a professional archaeologist recognized by the GN Territorial Archaeologist to advise on archaeological concerns. <u>Training & Employment Opportunities</u> GN-TIN will continue to maximize training, employment, and procurement opportunities for local Inuit. Local hiring and services will be employed where possible.

ID No.	CIRNAC Information Request	CIRNAC Recommendation	GN TIN Response
			<u>Reclamation</u> Please see Section 5.3.13 (Table 5-13 (Reclamation Requirements)) of the EMP (Dynamic Ocean, 2025a). Drill and test pit footprint will be returned to the same condition they were in prior to the respective activities. Drill holes will be properly filled and capped, and all equipment and waste will be removed from the area. Regular project progress updates will be provided to the community.

3 Summary and Closing

We appreciate CIRNAC taking the time to participate in the NIRB's Public Comment Period and are available for further discussions if needed. If you require any clarification on our responses, or have further questions, please do not hesitate to contact Victoria Burdett-Coutts (Vburdett-coutts@gov.nu.ca; 778-839-2372).

Theo Potgieter 
A/Manager, Facility Planner

Theo Potgieter
Government of Nunavut
Manager Facility Planning, Capital
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Victoria Burdett-Coutts, MSc., RPBio
Government of Nunavut
Senior Regulatory Advisor

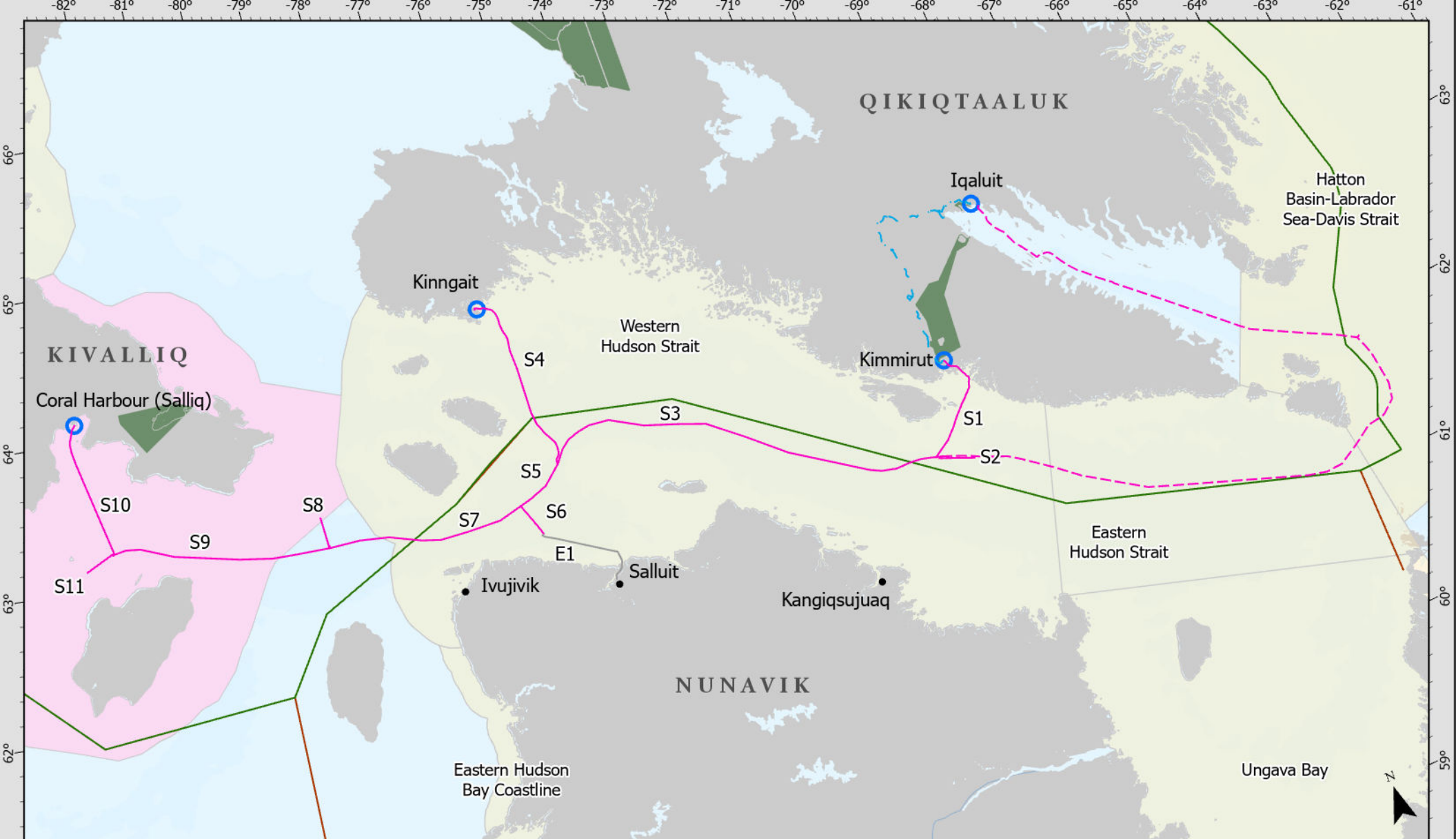
Cc:

- Muhammad Arslan, muhammad.arslan@rcaanc-cirnac.gc.ca
- David Abernethy, david.abernethy@rcaanc-cirnac.gc.ca

4 References

- CIRNAC. (2025). Re: Notice of Screening for Government of Nunavut's "The Kivalliq-Baffin Connector Horizontal Directional Drilling Engineering Support Program" Project Proposal. Comments to NIRB. 28 October 2025.
- Dynamic Ocean. (2025a). Kivalliq-Baffin Connector Project Horizontal Directional Drilling Engineering Support Program: Environmental Management Plan. Prepared for the Government of Nunavut. Doc No: PLN-GN-01.2-KBC HDD Engineering Support Program EMP-0001-25. 08 August 2025. Rev1.
- Dynamic Ocean. (2025b). Kivalliq-Baffin Connector Project Horizontal Directional Drilling Engineering Support Program - Nunavut Impact Review Board Application Letter. Prepared for Government of Nunavut. Doc No: LET-GN-01.1-NIRB KBC HDD Engineering Support Program-0002-25.Rev0.
- ECCC. (2025). RE: 25YN061 – Government of Nunavut – The Kivalliq-Baffin Connector Horizontal Directional Drilling Feasibility Study" Project Proposal. Comments to NIRB. 29 October 2025.
- NIRB. (2025a). Re: NIRB 126222 / 25YN061: New Project Accepted for Government of Nunavut's "The Kivalliq-Baffin Connector Horizontal Directional Drilling Engineering Support Program". Email correspondence from NIRB to GN-TIN on 07 October 2025.
- NIRB. (2025b). Re: NIRB 126222/25YN061: Comments Received for GN's "The Kivalliq-Baffin Connector Horizontal Directional Drilling Engineering Support Program" Project Proposal. Email correspondence from NIRB to GN-TIN on 30 October 2025.
- Nunavut Planning and Project Assessment Act*. SC 2013, c. 14, s. 2. Last amended: May 27, 2022. Available at: <https://laws-lois.justice.gc.ca/eng/acts/N-28.75/>. Accessed: August 2025.
- TC. (2025). Re: Kivalliq-Baffin Connector Horizontal Directional Drilling (HDD) Feasibility Study (NIRB# 25YN061). Comments to NIRB. 28 October 2025.

Appendix A: Supporting Figures



Legend

Project Components

- Cable Route
- Iqaluit (Option 1, Terrestrial)
- Iqaluit (Option 2, Marine)
- Cable Landing Station

EUAFON Project

- Existing Cable Route

- Protected and Conserved Areas
- Ecologically and Biologically Significant Areas
- Southampton Island Area of Interest
- Nunavut Settlement Area
- Nunavik Marine Region

Drawn: BB

Edited: AW

Approved: VBC

Kivalliq-Baffin Connector Project

Kivalliq-Baffin Connector Project Cable Route & Designated Habitats

Figure A-1



Spatial Reference
GCS: GCS North American 1983
Datum: North American 1983
Projection: Albers
Map Units: Metre

0 20 40 80
km

Scale: 1:4,000,000



Appendix B: Information Requests



CIRNAC Comments to NIRB

Re: Notice of Screening for Government of Nunavut's
"The Kivalliq-Baffin Connector Horizontal Directional
Drilling Engineering Support Program" Project Proposal



Nunavut Regional Office
918 Sivumugiaq Street
Iqaluit, NU, X0A 3H0

Your file - Votre référence
25YN061
Our file - Notre référence
GCdocs# 138991215

October 28, 2025

Amir Pourmahabadian
Senior Impact Assessment Officer
Nunavut Impact Review Board
P.O. Box 1360
Cambridge Bay, NU, X0B 0C0
via NIRB public registry

Re: Notice of Screening and Comment Request for Government of Nunavut's "The Kivalliq-Baffin Connector Horizontal Directional Drilling Engineering Support Program" Project Proposal

Dear Amir Pourmahabadian,

On October 7, 2025, the Nunavut Impact Review Board (NIRB) invited parties to comment on Government of Nunavut's "The Kivalliq-Baffin Connector Horizontal Directional Drilling Engineering Support Program" project proposal. Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) offers the responses below as it pertains to the NIRB's request:

Any matter of importance to the Party related to the project proposal

CIRNAC #1: Sediment and Water Quality

The Project involves Horizontal Directional Drilling (HDD) entry points and associated works near the shoreline. The Environmental Management Plan references Canadian Council of Ministers of the Environment (CCME) Water Quality Guidelines and states that turbidity exceedances are not anticipated, citing a 30 m compliance monitoring zone and the relatively small drill-head footprint (≈150 mm). However, the Plan does not clearly outline how potential sediment or drilling fluid releases from land-based activities will be monitored and managed. CIRNAC recommends that the Proponent consider implementing best management practices, including:

- Establishing background water quality conditions before drilling and documenting monitoring results regularly; and,
- Tracking borehole fluid returns continuously to detect losses that could cause sediment release.



CIRNAC #2: Waste Management

The Project adopts a “pack in, pack out” approach for equipment and materials, including segregation and labeling of wastes, returning drill cuttings to boreholes, and using biodegradable fluids, while sewage will be managed through existing facilities. However, the application lacks detailed provisions for waste management, as it does not identify designated reception facilities for solid waste streams, specify handling and segregation protocols. CIRNAC recommends the Proponent considers:

- Storing wastes in designated areas away from waterbodies in line with relevant authorizations; and,
- Containing and stabilizing drilling fluids and cuttings, and confirming disposal pathways for residual materials.

CIRNAC #3: Consultation with Interested Parties

CIRNAC recommends that the Proponent continue consulting with the Municipality of Resolute Bay and any other relevant organizations or individuals regarding the project proposal. As part of these consultation activities, several issues should be considered, including, but not limited to:

- Incorporation of Inuit Qaujjimajatuqangit and Community Knowledge, in addition to scientific ways of knowing into project activities;
- Mitigation measures to prevent any disturbance to wildlife and the environment;
- Mitigation measures to prevent disturbance to sites of cultural, archaeological, and/or environmental significance;
- Training and employment opportunities for Inuit and community members;
- Procurement opportunities for local and Inuit-owned businesses;
- Planning efforts for the closure of the existing municipal solid waste facility; and,
- Regular updates on the status of project activities.

CIRNAC appreciates the opportunity to provide comments. Should you have any questions, please contact Muhammad Arslan by e-mail at muhammad.arslan@rcaanc-cirnac.gc.ca or David Abernethy by email at david.abernethy@rcaanc-cirnac.gc.ca.

Sincerely,



Richard Bingley
Manager, Impact Assessment

