



SCREENING DECISION REPORT NIRB FILE No.: 25YN039

Commission File No.: 150563

June 2, 2025

Following the Nunavut Impact Review Board's (NIRB or Board) assessment of all materials provided, the NIRB is recommending that a review of University of Alberta's "Assessing the ecological risk associated with critical mineral extraction and low-sulphur fuels in Northern ecosystems" is not required pursuant to Article 12, Section 12.4.4(a) of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and s. 92(1)(a) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*).

Subject to the Proponent's compliance with the terms and conditions as set out in below, issued in accordance with s. 92(2)(a) of *NuPPAA*, the NIRB is of the view that the project proposal is not likely to cause significant public concerns, and it is unlikely to result in significant adverse environmental and social impacts. The NIRB therefore recommends that the responsible Minister(s) accepts this Screening Decision Report.

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REGULATORY FRAMEWORK

The primary objectives of the NIRB are set out in Article 12, Section 12.2.5 of the *Nunavut Agreement* and are confirmed by s. 23 of the *NuPPAA*. The purpose of screening is provided for under Article 12, Section 12.4.1 of the *Nunavut Agreement* and s. 88 of the *NuPPAA*.

As set out under Article 12, Section 12.4.4 of the *Nunavut Agreement* and s. 92(1) of the *NuPPAA*, upon conclusion of the screening process, the Board must provide its written report the Minister indicating one of three options:

- (a) a review of the project is not required;
- (b) a review of the project is required; or
- (c) the project should be modified or abandoned.

PROJECT OVERVIEW & THE NIRB ASSESSMENT PROCESS

On April 22, 2025, the NIRB received a referral to screen University of Alberta's "Assessing the ecological risk associated with critical mineral extraction and low-sulphur fuels in Northern ecosystems" project proposal (NIRB File No.: 25YN039) from the Nunavut Planning Commission (Commission), which noted that the project proposal is outside the area of an applicable regional land use plan.

All documents received and pertaining to this project proposal can be accessed from the NIRB's Public Registry by using any of the following search criteria or www.nirb.ca/project/126179.

- Project Name: Assessing the ecological risk associated with critical mineral extraction and low-sulphur fuels in Northern ecosystems
- NIRB File No.: 25YN035
- NIRB Application No.: 126179

1. Screening Process Timelines

The following key stages were completed for the screening process:

Table 1: NIRB's Assessment Process

Date	Stage
April 22, 2025	Receipt of project proposal and referral from the Commission
May 1, 2025	Pursuant to s. 144(1) of the <i>NuPPAA</i> requested an application on Public Registry and provide information
April 23, 2025	Receipt of online application from Proponent
April 23, 2025	Scoping pursuant to s. 86(1) of the <i>NuPPAA</i>
May 2, 2025	Public engagement and comment request (which included terms and conditions) was issued in English and translations were issued later to the community of Cambridge Bay
May 12, 2025	Receipt of public comments
June 2, 2025	Issuance of Screening Decision Report

2. Project Scope

Project:	Assessing the ecological risk associated with critical mineral extraction and low-sulphur fuels in Northern ecosystems
Region:	Kitikmeot
Location:	Cambridge Bay, Dease Strait and Grenier Lake
Summary of Project Description:	The Proponent intends to conduct research activities to investigate how cold-adapted Arctic organisms would respond to exposure to metal contaminants and oil-related chemicals, with eventually improving protocols and water quality guidelines to protect Northern ecosystems from human-associated disturbances.
Project Proposed Timeline:	April to September starting in 2025 and ending in 2027 (three (3) year project)

As required under s. 86(1) of the *NuPPAA*, the Board accepts the scope of the project as set out by University of Alberta in the proposal. The scope of the project proposal includes the following undertakings, works, or activities:

- Collect sea-ice algae and copepods from sea ice between Cambridge Bay and Dease Strait in May;
 - Use of snow machines to travel to sampling sites;
 - Use of ice corer to collect algae growing underneath sea ice;
 - Use of seawater pump to collect seawater;
 - Use of plankton net to collect copepods;
 - Use of gasoline to refuel snow machines;
- Collect Daphnia (water fleas) and water samples from six (6) locations around Greiner Lake and an outflow of sewage lagoon in August;
 - Use of vehicles to access sampling sites;
 - Use of a boat to collect samples from Grenier Lake;
 - Use of pump or bucket to collect water samples;
- Use of Canadian High Arctic Research Station (CHARS) facilities to expose organisms collected to key metal contaminants (copper, zinc, cobalt, nickel, lithium) and oil-related chemicals (including PFAS and compounds from low-sulphur fuels);
- Shipment of organisms following experiment to a southern laboratory for further studies on how contaminants build up over time;
- Hiring of local hunters and trappers organization to assist in fieldwork;
- Hire research equipment and services for ice, research and animal guiding from Vivitem company;
- Use of accommodations and facilities in Cambridge Bay including the Canadian High Arctic Research Station; and
- Ongoing engagement with local communities and Indigenous organizations to share findings and support local perspectives.

3. Inclusion or Exclusion to Scoping List

At this time, the NIRB has identified no additional works or activities in relation to the project proposal. As a result, the NIRB will proceed with screening the project based on the scope as described above.

4. Public Comments and Concerns

Notices regarding the NIRB's screening of this project proposal were distributed to community organizations (Table 1) as well as to relevant federal and territorial government agencies, Inuit organizations and other parties requesting they provide the Board with any comments or concerns regarding:

- Whether the project proposal is likely to arouse significant public concern; and if so, why;
- Whether the project proposal is likely to cause significant adverse eco-systemic or socio-economic effects; and if so, why;
- Whether the project proposal is likely to cause significant adverse impacts on wildlife habitat or Inuit harvest activities; and if so, why;
- Whether the project proposal is of a type where the potential adverse effects are highly predictable and mitigable with known technology, (and providing any recommended mitigation measures); and
- Any matter of importance to the Party related to the project proposal.

On or before May 13, 2025 the NIRB received comments from the following interested parties:

Table 2: Comments Received

Commenting Party	NIRB Doc ID No.
Kitikmeot Inuit Association	355098
Government of Nunavut	355173
Crown-Indigenous Relations and Northern Affairs Canada	355157
Fisheries and Oceans Canada	355159
Transport Canada	355086

a. Summary of Comments and Concerns Received

The following provides a summary of the comments and concerns received by the NIRB in relation to “Assessing the ecological risk associated with critical mineral extraction and low-sulphur fuels in Northern ecosystems”:

Kitikmeot Inuit Association

- Noted concerns regarding fish and their habitat, traditional uses of land, Inuit harvesting activities and community involvement and consultation.
- Recommended that appropriate spill kits and secondary containment are in place if fuel is stored used during ice sampling.
- Recommended Proponent minimize disturbance to over-ice travel routes and subsistence harvesting areas when travelling on sea ice.

- Recommended Proponent continue to collaborate with the Ekaluktutiak Hunters and Trappers Organization (EHTO) regarding land use, travel routes and sampling locations to ensure safe travels on sea-ice during spring months.

Government of Nunavut (GN)

- Has no comments or concerns to raise following review of the proposal.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)

- Noted concern with the use of Chelex chelating resin and adsorptive media in the laboratory to remove contaminants before disposal. Recommended the Proponent that the treated effluent quality is monitored regularly to confirm if the process remains effective in remove contaminants prior to release in the CHARS sinks. Further recommended, the Proponent incorporate the best management practices to mitigate any potential impacts from the proposed activities.
- Recommended the Proponent continue to consult with the community of Cambridge Bay, the EHTO, and any other relevant organizations on the proposed project. Recommended the Proponent consult on several issues including the following:
 - Incorporation of Inuit Qaujimajatuqangit;
 - Mitigation measures designed to prevent any disturbance to wildlife and the environment;
 - Experience of community members who participate in traditional harvesting activities within or close proximity to the project area;
 - Mitigation measures designed to prevent disturbance to sites with cultural sites and/or environmental significance;
 - Training, employment opportunities, and local procurement opportunities; and,
 - Providing regular updates on the status of the project activities.

Fisheries and Oceans Canada (DFO)

- Noted concerns regarding fish and their habitat in that direct fish mortality can occur during water withdrawal activities through entrainment/impingement;
- Recommended the Proponent follow DFO's protective measures for fish and fish habitat and standard codes of practice in order to comply with the *Fisheries Act*;
- Noted that if the proposal meets the criteria for site specific review, the Proponent should complete and submit the request for review to DFO; and,
- Noted that it is the Proponent's Duty to Notify DFO if they have caused, are about to cause, the death of fish by means other than fishing.

Transport Canada (TC)

- Has reviewed the proposal and have no comments to submit as none of the project components fall within TC's mandate.

5. Comments and Concerns with respect to Inuit Qaujimaningit, Indigenous and Community Knowledge

No concerns or comments were received with respect to Inuit Qaujimaningit, Indigenous and Community Knowledge in relation to this project proposal.

In determining whether a review of the project is required, the Board considered whether the project proposal had potential to result in significant ecosystemic or socio-economic impacts. Table 3. The Board took particular care to consider Inuit Qaujimaningit, Indigenous and Community Knowledge in carrying out its assessment and determination of the significance of impacts.

The following is a summary of the Board's assessment of the factors that are relevant to the determination of significant impacts with respect of this project proposal:

Table 3: Summary of the Board's Assessment of Factors s. 90 *NuPPAA*

Factor	Comment
The size of the geographic area, including the size of wildlife habitats, likely to be affected by the impacts.	<ul style="list-style-type: none"> ▪ The physical footprint of the proposed project components is located within 15 kilometres of the community of Cambridge Bay, Dease Strait and Grenier Lake ▪ The proposed project would take place within habitats of far-ranging wildlife species such as migratory and non-migratory birds, Arctic fox, Arctic hare, caribou, muskox and Species at Risk.
The ecosystemic sensitivity of that area.	<ul style="list-style-type: none"> ▪ No specific areas of ecosystemic sensitivity have been identified by the Proponent within the physical footprint of the proposed project.
The historical, cultural and archaeological significance of that area.	<ul style="list-style-type: none"> ▪ No specific areas of historical, cultural and archaeological significance have been identified by the Proponent within the physical footprint of the proposed project. Should the project be approved to proceed, the proponent would be required to report any archaeological/paleontological findings to the Government of Nunavut – Department of Culture and Heritage.
The size of the human and the animal populations likely to be affected by the impacts.	<ul style="list-style-type: none"> ▪ The proposed project is unlikely to result in impacts to local human and animal populations.
The nature, magnitude and complexity of the impacts; the probability of the impacts occurring; the frequency and duration of the impacts; and the reversibility or irreversibility of the impacts.	<ul style="list-style-type: none"> ▪ A zone of influence of up to 10 km from the most potentially-disruptive project activities was selected for the NIRB's assessment. ▪ With adherence to the relevant regulatory requirements and application of the mitigation measures recommended by the NIRB, no significant residual effects are expected to occur.
The cumulative impacts that could result from the impacts of the project combined with those of any other project that has been carried out, is being	<ul style="list-style-type: none"> ▪ The mitigation measures recommended by the NIRB have been designed with consideration for the potential for cumulative effects to result from the impacts of the project combined with other past, present and reasonably foreseeable projects.

Factor	Comment
carried out or is likely to be carried out.	
Any other factor that the Board considers relevant to the assessment of the significance of impacts.	<ul style="list-style-type: none"> No other relevant factors were identified; however, see below for Regulatory Requirements mandating mitigation and/or reporting.

Regulatory Requirements

The Proponent is also advised that the following legislation may apply to the Project:

Acts and Regulations

1. The *Fisheries Act* (<http://laws-lois.justice.gc.ca/eng/acts/F-14/index.html>).
2. The *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (<http://laws-lois.justice.gc.ca/eng/acts/n-28.8/>).
3. The *Migratory Birds Convention Act* (<http://laws-lois.justice.gc.ca/eng/acts/M-7.01/>), the *Migratory Birds Regulations* ([https://laws-lois.justice.gc.ca/eng/regulations/C.R.C., c. 1035/index.html](https://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._1035/index.html)) and the *Migratory Bird Sanctuary Regulations* ([https://laws-lois.justice.gc.ca/eng/regulations/C.R.C., c. 1036/index.html](https://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._1036/index.html)).
4. The *Species at Risk Act* (<https://laws-lois.justice.gc.ca/eng/acts/s-15.3/>). Attached in **Appendix A** is a list of Species at Risk in Nunavut.
5. The *Wildlife Act (Nunavut)* and its corresponding regulations (<http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html>).
6. The *Transportation of Dangerous Goods Act* (<http://laws-lois.justice.gc.ca/eng/acts/t-19.01/>) and the *Transportation of Dangerous Goods Regulations* (<http://www.tc.gc.ca/eng/tdg/clear-tofc-211.htm>).
7. The *Canadian Environmental Protection Act* (<http://laws-lois.justice.gc.ca/eng/acts/C-15.31/>).
8. The *Canadian Navigable Waters Act* (<https://laws.justice.gc.ca/eng/acts/N-22/>).

Views of the Board

In considering the above factors, the Board has identified the following and respectfully provides its views regarding whether or not the proposed project has the potential to result in significant impacts. The NIRB has also proposed terms and conditions that would mitigate the potential adverse impacts identified.

Ecosystem, wildlife habitat and Inuit harvesting activities:

Valued Component	Migratory and non-migratory birds, terrestrial wildlife and Species at Risk
Potential effects:	Potential adverse effects to migratory and non-migratory birds, Species at Risk, wildlife such as caribou, wolves, foxes, and their migratory routes from noise and visual disturbance generated from the transportation of personnel and equipment via snowmachine, vehicles and boat to the proposed research sites to conduct scientific research near the community of Cambridge Bay.
Nature of Impacts:	The potential for impact(s) is applicable to a small set of research sites outside of the community of Cambridge Bay, is considered to be limited due to the temporary activities, and due to infrequent activities within sensitive wildlife temporal periods. Project activities, such as transport or drilling for core samples could potentially disturb caribou and migratory birds with home range sizes habituated to the project area; however, any resulting impacts would be expected to be reversible and temporary only.
Mitigating Factors:	<p>The Proponent proposes to minimize impacts by minimizing noise associated with the research activities.</p> <p>Minimum flight altitudes and seasonal restrictions are expected to mitigate potential adverse impacts to terrestrial wildlife and migratory birds.</p>
Proposed Terms and Conditions:	<p>Waste Management – 9</p> <p>Fuel and Chemicals – 12</p> <p>Wildlife-General – 15 through 18</p> <p>Migratory Birds and Raptors Disturbance – 19 and 20</p> <p>Caribou and Muskoxen Disturbance – 21 through 23</p>

Valued Component	Marine aquatics
Potential effects:	Potential adverse impacts to the marine aquatic environment from the research activities.
Nature of Impacts:	The potential impacts are applicable to a small set of research activities outside of Cambridge Bay and the probability of impacts occurring is considered to be low, with potential adverse effects anticipated to be low in magnitude, infrequent in occurrence and reversible in nature.
Mitigating Factors:	The Board is recommending terms and conditions to minimize the impacts to the marine waters.
Proposed Terms and Conditions:	<p>Watercourses/Waterbodies – 6 through 9</p> <p>Fuel and Chemical Storage – 11 through 13</p>

Valued Component	Surface water quality, fish and fish habitat, soil and vegetation
Potential effects:	Potential adverse impacts to the aquatic environment, the land and vegetation from transportation of personnel to research sites and research activities.
Nature of Impacts:	The potential impacts are applicable to a small set of research activities outside of Cambridge Bay and the probability of impacts occurring is considered to be low, with potential adverse effects anticipated to be low in magnitude, infrequent in occurrence and reversible in nature.
Mitigating Factors:	The Board is recommending terms and conditions to minimize impacts to the aquatic environment, the land and vegetation.
Proposed Terms and Conditions:	Waste Management – 9 and 10 Fuel and Chemical Storage – 11 through 13 Air Quality – 14 Wildlife-General – 15 Road and Ground Disturbance – 24 and 25 Land Use and Restoration of Disturbed Areas – 26 through 29

Valued Component	Public and Traditional Land Use Activities
Potential effects:	No specific concerns or impacts to public and traditional land use activities in the area have been identified, however, the Board is recommending terms and conditions to ensure project activities are informed by available Inuit Qaujimaningit and that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.
Nature of Impacts:	The potential for impacts is considered to be minimal due to the temporary and low-impact nature of the activities and any resulting impacts would be expected to be reversible.
Mitigating Factors:	It is possible that the area could be used for traditional activities; however, no comments were received from the nearest communities on this aspect. As noted, the Board is recommending the Proponent engage with local residents if possible and practical, regarding planned activities in the area to ensure project activities are informed by available Inuit Qaujimaningit and that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities, and to ensure safety to the public.
Proposed Terms and Conditions:	Waste Management – 9 Fuel and Chemical Storage – 12 Wildlife-General – 15 and 16 Caribou and Muskoxen Disturbance – 21 through 23 Public Consultation – 32 Traditional Harvesting – 33

Socio-economic effects on northerners:

Valued Component	Historical, Cultural and Archaeological Sites
Potential effects:	No historical sites in the proposed project area were identified by the Proponent within the physical footprint of the proposed project.
Nature of Impacts:	The potential for impacts are considered minimal due to the nature of the activities.
Mitigating Factors:	The Proponent is required to contact the Culture and Heritage Department when encountering any historical sites. The Board is also recommending terms and conditions to ensure that project activities do not negatively affect historical or heritage sites.
Proposed Terms and Conditions:	Heritage Sites – 30 and 31

Valued Component	Local employment and economic opportunities
Potential effects:	Potential positive impacts to the local community as the Proponent committed to hire local community members to assist in field work, hire local services for ice/animal guiding, use local accommodations and would be consulting with the local community members on the research activities.
Nature of Impacts:	The potential for socio-economic impacts are considered positive. The Proponent has committed to consult with local communities on the results of the research activities. Further, the Proponent has committed to hire a local company to assist with the research, and ice and animal guiding which provides income to a local community members.
Mitigating Factors:	Terms and conditions are recommended to ensure the Proponent informs the community of the research activities and findings, and access local services.
Proposed Terms and Conditions:	Public Consultation – 32 Local Hiring and Access Local Services – 34

Significant public concern:

Valued Component	Public Concerns
Potential effects:	No significant public concern was expressed during the public commenting period for this file.
Nature of Impacts:	The potential for impacts is considered to be minimal as long as the Proponent follows the recommended terms and conditions.
Mitigating Factors:	The Board is recommending terms and conditions to ensure that to the extent possible, the Proponent hire locally and access local services where possible, and to ensure planned activities in the area utilizes available Inuit Qaujimaningit.
Proposed Terms and Conditions:	Public Consultation – 32 Local Hiring and Access Local Services– 34

Technological innovations for which the effects are unknown:

No specific issues have been identified associated with this project proposal.

Administrative Conditions:

To encourage compliance with applicable regulatory requirements and assist the Board and responsible authorities with compliance and effects monitoring for project activities, the following project-specific terms and conditions have been recommended: 1-5.

In considering the above factors and subject to the Proponent's compliance with regulatory requirements and the terms and conditions necessary to mitigate against the potential adverse environmental and social effects, the Board is of the view that the proposed project is unlikely to cause significant public concern and its adverse ecosystemic and socioeconomic impacts are unlikely to be significant, or are highly predictable and can be adequately mitigated by known technologies.

RECOMMENDED PROJECT-SPECIFIC TERMS AND CONDITIONS

The Board is recommending the following specific terms and conditions to apply in respect of the project:

General

1. University of Alberta (the Proponent) shall maintain a copy of the Project Terms and Conditions at the site of operation at all times and make it accessible to enforcement officers upon request.
2. The Proponent shall operate in accordance with all commitments stated in correspondence provided to the Nunavut Planning Commission (NPC File No.: 150563), and the NIRB (Online Application Form, Project Summary and Additional Information, April 23, 2025). This information should be accessible to enforcement officers upon request.
3. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.
4. The Proponent shall ensure that it meets the standards and/or limits as set out in the authorizing agencies' permits or licences as required for this project.
5. The Proponent shall ensure that all personnel, staff and contractors are adequately trained prior to commencement of all project activities, and shall be made aware of all operational plans, management plans, guidelines and Proponent commitments relating to the project.

Water courses/Water bodies (including fresh and marine waters)

6. The Proponent shall ensure that water extraction from any fish-bearing waterbody is done with appropriate care and caution. Small lakes or streams should not be used for water withdrawal unless approved by the appropriate authorizing agency.
7. The Proponent shall ensure that no disturbance of the stream bed, lakebed or the banks of any definable watercourse be permitted, except where deemed necessary for maintaining project-specific operational commitments or approved by a responsible authority in cases of spill management.

8. The Proponent shall not deposit, nor permit the deposit of any fuel, chemicals, wastes (including wastewater) or sediment into any water body. The Proponent should have in place an Emergency Spill Response Plan that is approved by the appropriate authorizing agency(ies).

Waste Management

9. The Proponent shall manage all hazardous and non-hazardous waste including food, domestic wastes, debris and petroleum-based chemicals (e.g., greases, gasoline, glycol-based antifreeze) in such a manner to avoid release into the environment and access to wildlife at all times until disposed of appropriately or at an approved facility.
10. The Proponent shall dispose of all combustible wastes as required by the appropriate authorizing agencies. All non-combustible wastes from the project site shall be removed to an approved facility for disposal.

Fuel and Chemical Storage

11. The Proponent shall have a Spill Contingency Plan in place at all fuel storage or transfer locations and shall ensure that appropriate spill response equipment and clean-up materials (e.g., shovels, pumps, barrels, drip pans, and absorbents) are readily available.
12. The Proponent shall ensure that wildlife deterrent systems are utilized at the time of a spill incident in order to avoid wildlife (terrestrial or marine) and migratory birds from being contaminated.
13. The Proponent shall ensure that all spills of fuel or other deleterious materials of 100 litres or more must be reported immediately to the 24-hour Spill Line at (867) 920-8130.

Air Quality

14. The Proponent shall eliminate unnecessary idling to reduce greenhouse gas emissions as much as possible.

Wildlife – General

15. The Proponent shall not substantially alter or damage or destroy any wildlife habitat in conducting this operation unless otherwise authorized by the appropriate authorizing agencies.
16. The Proponent shall not chase, weary, harass or molest wildlife. This includes persistently circling, chasing, hovering over, pursuing or in any other way harass wildlife, or disturbing large groups of animals.
17. The Proponent shall not hunt or fish, unless proper Nunavut authorizations have been acquired.
18. The Proponent shall ensure that all wildlife have the right-of-way on any roads or trails. Vehicles are required to slow down or stop and wait to permit the free and unrestricted movement of wildlife across roads or trails at any location.

Migratory Birds and Raptors Disturbance

19. The Proponent shall carry out all phases of the project in a manner that protects migratory birds and avoids harming, killing or disturbing migratory birds or destroying, disturbing or taking their nests or eggs. In this regard, the Proponent shall take into account Environment and Climate Change Canada's *Avoidance Guidelines*. The Proponent's actions in applying the *Avoidance Guidelines* shall be in compliance with the *Migratory Birds Convention Act, 1994* and with the *Species at Risk Act*.
20. The Proponent shall not disturb or destroy the nests or eggs of any birds. If active nests of any birds are discovered or located (i.e., with eggs or young), the Proponent shall avoid these areas until nesting is complete and the young have naturally left the vicinity of the nest by establishing a protection buffer zone¹ appropriate for the species and the surrounding habitat.

Caribou and Muskoxen Disturbance

21. The Proponent shall avoid interfering with any paths or crossings known to be frequented by caribou during periods of migration as identified by current land use plans in place and/or by Inuit Qaujimaningit.
22. The Proponent shall not locate any operation or undertake activities that could block or cause any diversion to migration of caribou or muskoxen.
23. The Proponent shall immediately cease activities likely to interfere with the migration or calving of caribou or muskoxen until such time as the caribou or muskox have passed.

Road and Ground Disturbance

24. The Proponent shall not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles must be suspended if rutting occurs.
25. The Proponent shall not move any equipment or vehicles without prior testing the thickness of the ice to ensure the sea ice is in a state capable of fully supporting the equipment or vehicles.

Land Use and Restoration of Disturbed Areas

26. The Proponent shall use existing trails where possible during project activities on the land.
27. The Proponent shall ensure that the land use area is kept clean and tidy at all times.
28. The Proponent shall remove all garbage, fuel and equipment at the end of each field season and/or upon completion of work and/or upon abandonment.
29. The Proponent shall ensure that all disturbed areas are restored to a stable or pre-disturbed state using Best Available Technology Economically Achievable (BATEA) upon completion of work and/or abandonment.

¹ Recommended setback distances to define buffer zones have been established by Environment and Climate Change Canada for different bird groups nesting in tundra habitat and can be found at www.ec.gc.ca/paom-itmb.

Heritage Sites

30. The Proponent shall ensure that archaeological and paleontological sites are not purposely or inadvertently disturbed as a result of project activities.
31. The Proponent shall ensure that all personnel are aware of the Proponent's responsibilities and requirements regarding archaeological or palaeontological sites that are encountered during land-based activities. This should include briefings explaining the prohibitions regarding removal of artifacts, and defacing or writing on rocks and infrastructure.

Other

32. The Proponent should engage with local residents regarding planned activities in the area and should solicit available Inuit Qaujimaningit and information regarding current recreational and traditional usage of the project area which may inform project activities. Posting of translated public notices and direct engagement with potentially interested groups and individuals prior to undertaking project activities is strongly encouraged.
33. The Proponent shall ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.
34. The Proponent should, to the extent possible, hire local people and access local services where possible.

OTHER NIRB CONCERNS AND RECOMMENDATIONS

In addition to the project-specific terms and conditions, the Board is recommending the following:

Change in Project Scope

1. Responsible authorities or Proponent shall notify the Nunavut Planning Commission and/or Parks Canada as appropriate, and the NIRB of any changes in operating plans or conditions, including phase advancement, associated with this project prior to any such change.

Copy of licences, etc. to the Board and Commission

2. The NIRB respectfully requests that responsible authorities submit a copy of each licence, permit or other authorization issued for the Project to the NIRB to assist in enabling possible project monitoring that may be required. Please forward a copy of the licences, permits and/or other authorizations to the NIRB directly at info@nirb.ca or upload a copy to the NIRB's online registry at www.nirb.ca.

Use of Inuit Qaujimaningit

3. The Proponent is encouraged to work with local communities and knowledge holders to inform project design, to carry out the project, and to confirm or validate the perspectives represented in publications, and reports produced as part of the project. Care should be taken to ensure that Inuit Qaujimaningit and local knowledge collected for the project is used with permission and is accurately represented.

Bear and Carnivore Safety

4. The Proponent should review the Government of Nunavut's booklet on Bear Safety, which can be downloaded from this link: http://gov.nu.ca/sites/default/files/bear_safety_-_reducing_bear-people_conflicts_in_nunavut.pdf. Further information on bear/carnivore detection and deterrent techniques can be found in the "*Safety in Grizzly and Black Bear Country*" pamphlet, which can be downloaded from this link: https://www.enr.gov.nt.ca/sites/enr/files/resources/safety_in_grizzly_and_black_bear_country_english.pdf.
5. There are polar bear and grizzly bear safety resources available from the Bear Smart Society with videos on polar bear safety available in English, French and Inuktitut at <http://www.bearsmart.com/play/safety-in-polar-bear-country/>. Information can also be obtained from Parks Canada's website on bear safety at the following link: <http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaaq/visit/visit6/d.aspx> or in reviewing the "*Safety in Polar Bear Country*" pamphlet, which can be downloaded from the following link: http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaaq/visit/visit6/~media/pn-np/nu/auyuittuq/pdf/shared/PolarBearSafety_English.ashx.
6. Any problem wildlife or any interaction with carnivores should be reported immediately to the local Government of Nunavut, Department of Environment Conservation Office (Conservation Officer of Cambridge Bay, phone: (867) 983-4167).

Species at Risk

7. The Proponent review Environment and Climate Change Canada's "Environment Assessment Best Practice Guide for Wildlife at Risk in Canada", available at the following link: http://www.sararegistry.gc.ca/virtual_sara/files/policies/EA%20Best%20Practices%202004.pdf. The guide provides information to the Proponent on what is required when Wildlife at Risk, including *Species at Risk*, are encountered or affected by the project.

Migratory Birds

8. The Proponent review Canadian Wildlife Services' "Key migratory bird terrestrial habitat sites in the Northwest Territories and Nunavut", available at the following link: <http://publications.gc.ca/site/eng/317630/publication.html> and "Key marine habitat sites for migratory birds in Nunavut and the Northwest Territories", available at the following link: <http://publications.gc.ca/site/eng/392824/publication.html>. The guide provides information to the Proponent on key terrestrial and marine habitat areas that are essential to the welfare of various migratory bird species in Canada.
9. For further information on how to protect migratory birds, their nests and eggs when planning or carrying out project activities, consult Environment and Climate Change Canada's Incidental Take web page and the fact sheet "Planning Ahead to Reduce the Risk of Detrimental Effects to Migratory Birds, and their Nests and Eggs" available at: http://publications.gc.ca/collections/collection_2013/ec/CW66-324-2013-eng.pdf.

Heritage Resources

10. During the assessment, the NIRB has identified that no archaeology surveys have been conducted in the proposed project areas and that potential for the presence of archaeological resources is likely, therefore the Proponent shall contact the Department of Culture and Heritage to initiate a field archaeology assessment program prior to undertaking any land disturbance activities.

CONCLUSION

The foregoing constitutes the Board's screening decision with respect to the University of Alberta's "Assessing the ecological risk associated with critical mineral extraction and low-sulphur fuels in Northern ecosystems". The NIRB remains available for consultation with the Minister regarding this report as necessary.

Dated June 2, 2025 at Iqaluit, NU.



Albert Ehloak, *Acting* Chairperson

Attachments: Appendix A: Species at Risk in Nunavut

APPENDIX A: SPECIES AT RISK IN NUNAVUT

Due to the requirements of Section 79(2) of the *Species at Risk Act*, S.C. 2002, c. 29 (*SARA*), and the potential for project-specific adverse effects on listed wildlife species and its critical habitat, measures should be taken as appropriate to avoid or lessen those effects, and the effects need to be monitored. Project effects could include species disturbance, attraction to operations and destruction of habitat. This section applies to all species listed on Schedule 1 of *SARA*, as listed in the table below, or have been assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), which may be encountered in the project area. This list may not include all species identified as at risk by the Territorial Government. The following points provide clarification on the applicability of the species outlined in the table.

- Schedule 1 is the official legal list of Species at Risk for *SARA*. *SARA* applies to all species on Schedule 1. The term “listed” species refers to species on Schedule 1.
- Schedule 2 and 3 of *SARA* identify species that were designated at risk by the COSEWIC prior to October 1999 and must be reassessed using revised criteria before they can be considered for addition to Schedule 1.
- Some species identified at risk by COSEWIC are “pending” addition to Schedule 1 of *SARA*. These species are under consideration for addition to Schedule 1, subject to further consultation or assessment.

If species at risk are encountered or affected, the primary mitigation measure should be avoidance. The Proponent should avoid contact with or disturbance to each species, its habitat and/or its residence. All direct, indirect, and cumulative effects should be considered. Refer to species status reports and other information on the Species at Risk Registry at <http://www.sararegistry.gc.ca> for information on specific species.

Monitoring should be undertaken by the Proponent to determine the effectiveness of mitigation and/or identify where further mitigation is required. As a minimum, this monitoring should include recording the locations and dates of any observations of Species at Risk, behaviour or actions taken by the animals when project activities were encountered, and any actions taken by the proponent to avoid contact or disturbance to the species, its habitat, and/or its residence. This information should be submitted to the appropriate regulators and organizations with management responsibility for that species, as requested.

For species primarily managed by the Territorial Government, the Territorial Government should be consulted to identify other appropriate mitigation and/or monitoring measures to minimize effects to these species from the project.

Mitigation and monitoring measures must be undertaken in a way that is consistent with applicable recovery strategies and action/management plans.

Schedules of *SARA* are amended on a regular basis, so it is important to check the *SARA* registry (www.sararegistry.gc.ca) to get the current status of a species.

Updated: September 2024

Terrestrial Species at Risk²	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility³
Buff-breasted Sandpiper	Special Concern	Schedule 1	Environment and Climate Change Canada (ECCC)
Common Nighthawk	Threatened	Schedule 1	ECCC
Eskimo Curlew	Endangered	Schedule 1	ECCC
Harlequin Duck	Special Concern	Schedule 1	ECCC
Harris's Sparrow	Special Concern	Schedule 1	ECCC
Horned Grebe	Special Concern	Schedule 1	ECCC
Ivory Gull	Endangered	Schedule 1	ECCC
Olive-sided Flycatcher	Threatened	Schedule 1	ECCC
Peregrine Falcon	Special Concern	Schedule 1	ECCC
Red Knot Islandica Subspecies	Special Concern	Schedule 1	ECCC
Red-necked Phalarope	Special Concern	Schedule 1	ECCC
Ross's Gull	Threatened	Schedule 1	ECCC
Rusty Blackbird	Special Concern	Schedule 1	ECCC
Short-eared Owl	Special Concern	Schedule 1	ECCC
Porsild's Bryum	Threatened	Schedule 1	Government of Nunavut (GN)
Transverse Lady Beetle	Special Concern	No Schedule	GN
Caribou (Dolphin and Union Population)	Endangered	Schedule 1	GN
Caribou (Barren-ground Population)	Threatened	No Schedule	GN
Caribou (Torngat Mountains Population)	Endangered	No Schedule	GN
Grizzly Bear (Western Population)	Special Concern	Schedule 1	ECCC
Peary Caribou	Endangered	Schedule 1	GN
Polar Bear	Special Concern	Schedule 1	ECCC
Wolverine	Special Concern	Schedule 1	GN
Atlantic Walrus (High Arctic Population)	Special Concern	No Schedule	Fisheries and Oceans Canada (DFO)
Atlantic Walrus (Central/Low Arctic Population)	Special Concern	No Schedule	DFO
Beluga Whale (Cumberland Sound Population)	Threatened	Schedule 1	DFO
Beluga Whale (Eastern Hudson Bay Population)	Endangered	No Schedule	DFO
Beluga Whale (Eastern High Arctic-Baffin Bay Population)	Special Concern	No Schedule	DFO
Beluga Whale (Western Hudson Bay Population)	Special Concern	No Schedule	DFO
Atlantic Cod (Arctic Lakes Population)	Special Concern	No Schedule	DFO
Fourhorn Sculpin (Freshwater Form)	Data Deficient	Schedule 3	DFO
Lumpfish	Threatened	No Schedule	DFO
Thorny Skate	Special Concern	No Schedule	DFO

² The Department of Fisheries and Oceans has responsibility for aquatic species.

³ Environment and Climate Change Canada (ECCC) has a national role to play in the conservation and recovery of Species at Risk in Canada, as well as responsibility for management of birds described in the Migratory Birds Convention Act (MBCA). Day-to-day management of terrestrial species not covered in the MBCA is the responsibility of the Territorial Government. Populations that exist in National Parks are also managed under the authority of the Parks Canada Agency.