



NIRB File No.: 25YN039
Commission File No.: 150563

May 2, 2025

Tamzin Blewett
University of Alberta
85 & 118,
Edmonton, AB
T6G 2R3

Sent via email: tamzin@ualberta.ca

Re: Notice of Screening for University of Alberta's "Assessing the ecological risk associated with critical mineral extraction and low-sulphur fuels in Northern ecosystems" project proposal

Dear Tamzin Blewett:

On April 22, 2025 the Nunavut Impact Review Board (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 from the Nunavut Planning Commission (Commission), which noted that the project proposal is outside the area of an applicable regional land use plan. On April 23, 2025 the NIRB received the complete application from the Proponent.

Pursuant to Article 12, Sections 12.4.1 and 12.4.4 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and s. 87 of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*), the NIRB has commenced screening this project proposal and has assigned it file number **25YN039** - please reference this file number in all future related correspondence.

PROJECT OVERVIEW

Project Scope:

All documents received and pertaining to this project proposal can be accessed from the NIRB's online public registry at www.nirb.ca/project/126179.

Project:	Assessing the ecological risk associated with critical mineral extraction and low-sulphur fuels in Northern ecosystems
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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, 2025 ending in 2027 (three year project)

According to the project proposal, the scope of the project 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.

Inclusion or Exclusion of 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.

REQUEST FOR COMMENTS

All documents received can be accessed from the NIRB's online public registry at www.nirb.ca/project/126179 and include:

- *Commission Conformity Determination*
- *NIRB Application in English*
- *Non-technical Summaries in English, and Inuinnaqtun*
- *Greiner Lake Watershed*
- *Cambridge Bay Hunters and Trappers Organization Support Letter*
- *Sampling Location Figure*
- *Biological Spill Remediation Protocol*
- *General Safe Handling of Chemicals*
- *Biochar (Activated Charcoal) Wastewater Treatment Protocol*
- *Chelex® 100 and Chelex 20 Chelating Ion Exchange Resin Instruction Manual*

The NIRB will copy you on screening process related correspondence and upload related documents to the NIRB's online registry for public access. The NIRB may request additional information at any time during the process.

The NIRB is copying parties and municipalities potentially affected by University of Alberta's project proposal with this letter, and we invite interested parties to comment directly to the NIRB by **May 12, 2025**.

The NIRB would like parties to provide comments 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.

Please note that *proposed* project-specific terms and conditions, should the project proceed, have been attached for consideration and comment ([Appendix A](#)).

CONTACT INFORMATION

Please send your comments to the NIRB via email at info@nirb.ca, via fax at (867) 983-2594 or via the individual project dashboard for this assessment on the NIRB's online public registry at www.nirb.ca/project/126179.

If you have any questions or require clarification, feel free to contact the undersigned at (867) 983-4619 or kgillard@nirb.ca.

Sincerely,



Cassel Kapolak
Manager, Public Registry
Nunavut Impact Review Board

Attachments: Appendix A: *Proposed* Project Specific Terms and Conditions

Enclosures (4): Public Notice of Screening (English and Inuinnaqtun)
Comment Forms (English and Inuinnaqtun)

cc: Distribution List
Wynter Kuliktana, Kitikmeot Inuit Association
Tannis Bolt, Kitikmeot Inuit Association
Richard Dwyer, Nunavut Water Board
Justin Buller, Government of Nunavut
Dianne Lapierre, Government of Nunavut
Sean Joseph, Government of Nunavut
Jonas Azonaha, Government of Nunavut
Natalie D'Souza, Department of Environment - Government of Nunavut
Drikus Gissing, Department of Environment - Government of Nunavut
Mosha Cote, Nunavut Research Institute
Tracey McCaie, Crown-Indigenous Relations and Northern Affairs Canada
Marcus Bermann, Crown-Indigenous Relations and Northern Affairs Canada
José Audet-Lecouffe, Fisheries and Oceans Canada

Appendix A: Proposed Project Specific Terms and Conditions

The following is a list of project-specific terms and conditions which, should the project proceed, may be recommended to be attached to any approval.

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.

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.

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.

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.