



NIRB File No.: 25YN081

NIRB Public Registry Link: www.nirb.ca/project/126247

NPC File No.: 150950

November 27, 2025

John Yackel
University of Calgary,
2500 University Dr. N.W., Earth Sciences 356,
Department of Geography, Calgary, AB T2N 1N4

Sent via email: yackel@ucalgary.ca

Re: Notice of Screening and Comment Request for Copernicus Expansion Missions Sea Ice Experiment (CEMSIE)

Dear John Yackel:

The Nunavut Impact Review Board (NIRB) received a referral to screen John Yackel's Copernicus Expansion Missions Sea Ice Experiment (CEMSIE)" project proposal:

- 17th November 2025, the Nunavut Planning Commission noted noting positive conformity.
- On 18th October, 2025, NIRB received a complete application and assigned file number **25YN081**, please reference this file number in all future related correspondence.

The NIRB has commenced screening the project proposal pursuant to the *Nunavut Agreement* and *Nunavut Planning and Project Assessment Act*¹ and by copy of this letter, **invites interested parties and municipalities potentially affected by the proposal to comment directly to the Nunavut Impact Review Board.**

SCOPE OF PROPOSED PROJECT

Location	Kitikmeot Region, Landfast sea ice located approximately 15–20 km southwest of Cambridge Bay, with airborne surveys conducted over Dease Strait, Queen Maud Gulf, and Victoria Strait. All operations will be supported by CHARS in Cambridge Bay
Objective	The Proponent intends to improve satellite measurements of Arctic first-year sea ice and snow by collecting on-ice and airborne data. The project seeks to enhance climate monitoring, weather forecasting, and northern community

¹ 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*)

	safety while integrating Indigenous and local knowledge and producing an open reference dataset for future research.
Timeline	15 th March 2026 to 05 th May 2026 and Airborne surveys scheduled for April 10 th –15 th , 2026 (weather permitting).

According to the project proposal, the scope of the project includes the following undertakings, works or activities:

A. Field Camp Establishment (“Remote Sensing City”)

- Temporary, seasonal setup on landfast FYI ~15 km SW of Cambridge Bay.
- Consists of:
 - Portable tents
 - Small shelter structures
 - Equipment caches
- Accessed daily via snowmobiles.
- All infrastructure removed after fieldwork; no remnants left on ice.

B. In-Situ Snow and Sea Ice Data Collection

Daily field measurements include:

- Snow depth, temperature, density, salinity, grain size, structure
- Ice thickness, density, salinity, layering
- Surface roughness mapping
- Weather observations (air temperature, wind, humidity)
- Use of non-invasive tools:
 - Snow probes
 - Ice corers
 - Thermistor strings
 - Handheld radar and EM instruments

All equipment battery-powered and removed at completion.

C. Airborne Remote Sensing Campaign (CIMRair & CRISTALair)

- 2–3 dedicated flights conducted from Cambridge Bay Airport.
- Aircraft equipped with:
 - Passive microwave radiometers (CIMRair)
 - Radar altimeters (CRISTALair)
- Purpose:
 - Link ground measurements to satellite scales
 - Collect brightness temperature, radar backscatter, elevation profiles
- Survey path covers:
 - Dease Strait
 - Queen Maud Gulf
 - Victoria Strait

D. Satellite Data Integration & Validation

- Integration of:
 - Sentinel-1 / Sentinel-3
 - CIMR, CRISTAL, ROSE-L
 - Other supporting satellite platforms
- Activities include:
 - Harmonizing spatial/temporal datasets
 - Comparing satellite signatures with field/airborne data

Building a Reference Open Dataset for Copernicus calibration and validation

E. Transportation & Logistics

- Daily travel: snowmobiles, small sleds for scientific gear.
- Airborne missions: Twin Otter or similar fixed-wing aircraft.
- Occasional helicopter use for regional sampling.
- All logistics, equipment storage, and personnel accommodated at CHARS.
- No heavy equipment used at any time.

F. Community Engagement & Inuit Qaujimaqatuqangit (IQ) Integration

- Collaboration with:
 - Kitikmeot Inuit Association (KIA)
 - Hamlet of Cambridge Bay
 - Hunters & Trappers Organization (EHTO)
 - CHARS
 - POLAR
- Activities include:
 - Community meetings & presentations
 - Plain-language posters, summaries, maps
 - Opportunities for local guiding, logistics support, and observation during flights
 - Integration of local and Inuit knowledge to improve field planning and interpretation.

Inclusion or Exclusion of Scoping List

The NIRB has identified no additional work 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

Documents received and describing the proposal can be accessed from the NIRB's online public registry at www.nirb.ca/project/126247 including:

- *Commission Conformity Determination letter,*
- *Commission Project Application*
- *NIRB's Online Application*
- *Polar knowledge support letter (Canadian High Arctic Research Station), and*
- *Project Description.*

The NIRB may request additional information at any time during the process.

By copy of this letter, the NIRB is inviting interested parties and municipalities potentially affected by the project proposal to comment directly to the NIRB by **December 8, 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 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/1262347. Questions should be directed to the undersigned at ynasit@nirb.ca.

Sincerely,



Viren Nasit
Senior Impact Assessment Officer
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
Cory Barker, Kitikmeot Inuit Association
Tannis Bolt, Kitikmeot Inuit Association
Mosha Cote, Nunavut Research Institute
Natalie D'Souza, Department of Environment (GN-DOE)
Municipality of Cambridge Bay

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. John Yackel (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.:150950), and the NIRB (Online Application Form, Project Summary, November 18, 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.

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 locate all fuel and other hazardous materials a minimum distance away from the high-water mark of any water body and environmentally sensitive areas as required by the appropriate authorizing agencies. The materials shall be stored in such a manner as to prevent their release into the environment.
12. The Proponent shall use adequate secondary containment or a surface liner (e.g., self-supporting insta-berms and fold-a-tanks) when storing barreled fuel and chemicals at all locations.

13. The Proponent shall ensure that re-fuelling of all equipment occurs a minimum distance away from the high-water mark of any water body as required by the appropriate authorizing agencies.
14. All fuel and chemical storage containers must be clearly marked with the Proponent's name for ease of identification.
15. 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.
16. The Proponent shall follow the authorizing agencies' direction for management and removal of hazardous materials and wastes (e.g., contaminated soils, sediment and waste oil).
17. 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.
18. 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

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

Wildlife – General

21. 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.
22. 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.
23. The Proponent shall not hunt or fish, unless proper Nunavut authorizations have been acquired.
24. 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

25. 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.

26. 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 zone appropriate for the species and the surrounding habitat.

27. The Proponent shall avoid the seaward site of seabird colonies and areas used by flocks of migrating waterfowl, a minimum distance away on the recommendation of the appropriate authorizing agencies.

28. The Proponent shall not pursue seabirds or waterbirds swimming on the water surface and shall avoid concentrations of these birds if encountered on the water.

Aircraft Flight Restrictions

29. The Proponent shall not alter flight paths to approach wildlife and avoid flying directly over animals.

30. The Proponent shall plan flight paths that minimize flights over known habitat likely to have birds or concentrations of wildlife. Aircraft should avoid critical and sensitive wildlife areas at all times by choosing alternate flight corridors.

31. The Proponent shall restrict aircraft/helicopter activity related to the project to a minimum flight altitude of 610 metres (2,100 ft) above ground level except during landing, take-off or if there is a specific requirement for low-level flying, which does not disturb wildlife or migratory birds.

32. The Proponent shall avoid known concentrations of birds (e.g., bird colonies, moulting areas) by a lateral distance of 1.5 kilometre. If avoidance is not possible maintain a minimum flight altitude of 1,100 metres (3,500 feet) over these areas.

33. The Proponent shall ensure that aircraft/helicopter do not, unless for emergency, touch-down in areas where wildlife are present.

34. The Proponent shall advise all pilots of relevant flight restrictions and enforce their application over the project area, including flight paths to/from the project area.

Caribou and Muskoxen Disturbance

35. 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.

36. The Proponent shall not locate any operation or undertake activities that could block or cause any diversion to migration of caribou or muskoxen.

37. 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.

Other

52. 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.

53. The Proponent shall ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.

54. The Proponent should, to the extent possible, hire local people and access local services where possible.