



NIRB File No.: 22YN012
NPC File No.: 149703

March 28, 2022

Emily Geyman
California Institute of Technology
446 S Catalina Ave, 303B
Pasadena California 91106 USA

Sent via email: egeyman@caltech.edu

Re: Notice of Screening for California Institute of Technology's "Reconstructing ancient sea level and seafloor conditions in the 1.9-billion-year-old Rocknest Formation" project proposal

Dear Emily Geyman:

On February 24, 2022, the Nunavut Impact Review Board (NIRB) received a referral to screen California Institute of Technology's (Caltech) "Reconstructing ancient sea level and seafloor conditions in the 1.9-billion-year-old Rocknest Formation" 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. 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 **22YN012** - please reference this file number in all future related correspondence.

INFORMATION REQUEST

On February 24, 2022, the NIRB requested that the Proponent complete the online application form through the NIRB's public registry system and ensure, pursuant to s. 144(1) of the *NuPPAA*, that sufficient information is provided to determine the scope of the project activities being proposed and commence screening.

On March 14, 2022, the NIRB received the required information and commenced the screening pursuant to Part 3 of the *NuPPAA*.

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/125674.

Project:	Reconstructing ancient sea level and seafloor conditions in the 1.9-billion-year-old Rocknest Formation				
Region:	Kitikmeot				
Location:	Eokuk Lake				
Closest Community:	Kugluktuk	Distance (approximate)	101 kilometres (km)	Direction	Southeast
Summary of Project Description:	The Proponent intends to conduct geological research and hand-sampling to study the Rocknest Formation to better understand ancient climates.				
Project Proposed Timeline:	June 2022 to August 2022				

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

- Pick up and drop off by float plane;
- Establishment of a temporary three (3) person camp for six (6) weeks from June to August;
 - Use of fuel for camp stove and generator;
 - Disposal of human waste in a hand-dug pit, which will be covered upon departure;
 - Disposal of wastes in Yellowknife, Northwest Territories;
- Research activities of the Rocknest Formation;
 - Access to research sites by foot;
 - Use of handheld equipment (camera, magnifying glass, GPS, and hammer);
 - Collection of eight (8) five (5) gallon buckets of small rock chips (approximately thumb sized).

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/125674 and include:

- *Commission Conformity Determination*
- *Commission Application*
- *NIRB's Online Application*
- *Project Summary*
- *Additional Information*

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 Caltech's project proposal with this letter, and we invite interested parties to comment directly to the NIRB by **April 7, 2022**.

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/125674.

If you have any questions or require clarification, feel free to contact the undersigned at 867-983-4612 or ekoide@nirb.ca.

Sincerely,



Emily Koide
Technical Advisor I
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

Richard Dwyer, Nunavut Water Board

Geoff Clark, Kitikmeot Inuit Association

Wynter Kuliktana, Kitikmeot Inuit Association

Agnes Simonfalvy, Government of Nunavut

Amy Robinson, Government of Nunavut – Department of Environment

Dirkus Gissing, Government of Nunavut – Department of Environment

Mosha Cote, Nunavut Research Institute

Tracey McCaie, Crown – Indigenous Relations and Northern Affairs Canada

Hamlet of Kugluktuk

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. The California Institute of Technology (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.: 149703), and the NIRB (Online Application Form, March 14, 2022; Project Summary, March 14, 2022, and Additional Information, March 18, 2022). 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 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 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.

Wildlife – General

18. The Proponent shall not substantially alter, damage or destroy any wildlife habitat in conducting this operation unless otherwise authorized by the appropriate authorizing agencies.

19. 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.
20. The Proponent shall not hunt or fish, unless proper Nunavut authorizations have been acquired.

Migratory Birds and Raptors Disturbance

21. 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*.
22. 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.

Aircraft Flight Restrictions

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

Caribou and Muskoxen Disturbance

24. 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.

Land Use and Restoration of Disturbed Areas

25. The Proponent shall ensure that the land use area is kept clean and tidy at all times.
26. The Proponent shall avoid disturbance on slopes prone to natural erosion, and alternative locations shall be utilized.
27. 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.

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.

Camps

28. The Proponent shall ensure that all camps are located on durable surfaces, such as gravel or sand that is consolidated and can withstand repeated, heavy use. Measures shall be put in place to prevent erosion, trail formation and damage to the ground.

Heritage Sites

29. The Proponent shall ensure that archaeological and paleontological sites are not purposely or inadvertently disturbed as a result of project activities.
30. 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

31. The Proponent should consult with local residents regarding their activities in the area and solicit available Inuit Qaujimaningit and information that can inform project activities.
32. The Proponent shall ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.
33. The Proponent should, to the extent possible, hire local people and access local services where possible.