

July 25, 2017

Tara Arko  
Director, Technical Services  
Nunavut Impact Review Board  
P.O Box 1360  
Cambridge Bay, NU X0B 0C0

**Sent VIA Email: [info@nirb.ca](mailto:info@nirb.ca)**

**RE: Comment Request for Transition Metals’ “Arcadia Bay” project proposal (NIRB File No. 17EN059)**

Dear Tara Arko,

On behalf of the Government of Nunavut (GN), I would like to thank the Nunavut Impact Review Board (NIRB) for the opportunity to provide comments on Transition Metals' "*Arcadia Bay*" project proposal.

The GN has reviewed the proposed project and provides our comments in the following appendix.

Should you have any concerns with our comments, please contact me by phone at 867-975-7830 or by email at [ezell@gov.nu.ca](mailto:ezell@gov.nu.ca).

Qujannamiik,

[Original Signed By]

Erika Zell  
*Avatiliriniq Coordinator*  
*Government of Nunavut*

<b>GN-01: Archaeological resources</b>	
Department	Culture and Heritage
Organization	Government of Nunavut
Subject/Topic	Archaeological resources
References	NIRB Notice of Screening
<b>CONCERNS</b>	
<p>1. A search of the Nunavut Archaeological Site Database indicates that there are no recorded archaeological sites in the immediate vicinity of the proposed exploration areas. This however does not preclude the presence of unidentified sites or cultural features as to this day no systematic archaeological reconnaissance has been conducted in this area. However, the targeted area presents an extremely high potential with regards to archaeological resources as it is located between two major river systems draining into Coronation Gulf.</p> <p>The proponent plans an exploration program between 2017 and 2022. The proposed land use activities include the establishment of a camp, storage and laydown areas, the potential use of a barge landing site, as well as exploration activities such as staking, prospecting, drilling, sampling, and geophysics.</p> <p>2. Accompanying the application, the proponent is also producing an Environmental Management Plan in which archaeological and palaeontological Sites are addressed. To be current, the proponent should refer to the terms and conditions issued by the Department of Culture and Heritage attached to all NIRB screenings.</p>	
<b>SUGGESTIONS AND RECOMMENDATIONS</b>	
<p>On the basis that no archaeological surveys have been conducted in the proposed exploration areas and that the potential for the presence of archaeological resources is extremely high, the Department of Culture and Heritage recommends that a field archaeology assessment program be initiated prior to any land disturbance activities.</p> <p>As per the Department of Culture and Heritage land use terms and conditions, the proponent is requested to:</p> <ol style="list-style-type: none"> <li>1. Hire a qualified archaeologist to conduct an overview assessment of the study area;</li> <li>2. Conduct a field assessment of the complete footprint of the camp area(s) and associated components (heliport, roads, laydown areas, and barge landing, etc.);</li> <li>3. Assess all drilling locations (50 m radius) and water-hose route to the closest water source intake;</li> <li>4. Assess any sampling, prospecting, and all other locations where land disturbance activities are</li> </ol>	

planned to occur.

A thorough archaeological assessment will assist in determining the archaeological potential of the area and formulating mitigation plans for any archaeological resources that will be affected by the development.

The proponent should immediately contact the Territorial Archaeology office to obtain a list of archaeologists who are qualified to hold a permit in Nunavut.

#### **ADDITIONAL COMMENTS**

All archaeological and palaeontological sites in Nunavut are protected by law. The applicant must understand that it is their responsibility to ensure that no heritage resource sites are disturbed in the course of their activities. No person shall alter, or otherwise disturb an archaeological site, or remove any artifact from an archaeological site. Moreover, the building of inuksuit is not recommended.

<b>GN-02: Winter drilling</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Subject/Topic</b>	Winter drilling
<b>References</b>	Abandonment and Remediation Plan (ARP), 2. Schedule; Spill contingency and Fuel Management Plan (SCFMP), Section 1.7.2.4
<b>CONCERNS</b>	
<p>Winter drilling activities are mentioned in the management plans submitted in the application; however, details on these activities are not provided.</p>	
<b>SUGGESTIONS AND RECOMMENDATIONS</b>	
<p>The GN requests clarification from the Proponent on the scope of this project. Specifically, we request the Proponent clarify if they intend to conduct winter drilling activities as part of this project application.</p>	
<b>ADDITIONAL COMMENTS</b>	
<p>Winter drilling activities will need to be fully described if included in the scope of this project. Intervenors will require an opportunity to comment on the addition of these activities if included in this project application. Winter activities may pose additional impacts to the Dolphin and Union caribou herd that use this area throughout the winter.</p>	

<b>GN-03: Caribou habitat</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Subject/Topic</b>	Critical caribou habitat
<b>References</b>	Environnement Management Plan, section 4.2.2 page 6
<b>CONCERNS</b>	
<p>Transition Metals Corporation's definition of critical caribou habitat for the Arcadia Bay Project is of concern as it does not completely account for calving and post calving grounds that haven't been defined yet.</p>	
<b>SUGGESTIONS AND RECOMMENDATIONS</b>	
<p>Environment Climate Change Canada (ECCC) defines critical habitat as "necessary for the survival or recovery of the species" (Species at Risk Act [SARA], sc 2002, c 29). Considering this, the critical habitat for the Dolphin and Union caribou has not yet been defined and might include both its calving ground and the sea-ice used during migration.</p>	
<b>ADDITIONAL COMMENTS</b>	
<p>Even if most of the exploration activities do not overlap temporally with the Dolphin and Union caribou, there is spatial overlap in the habitat. Therefore, it is important to have a fully developed monitoring and management program in place to monitor the impacts on the habitat and provide detailed mitigation measures for long-term impacts to the caribou.</p>	

<b>GN-04: Caribou group size</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Subject/Topic</b>	Threshold of suspension of activities — caribou group size
<b>References</b>	Environnement Management Plan, section 4.2.2 page 7
<b>CONCERNS</b>	
<p>“Activities will be suspended if concentrations of caribou (50 or more) approach within 2 km of drilling operations.” This is of a concern as the terrain is full of blind spots and caribou can be overlooked if they are hiding in crevasses. The 50 or more caribou should be expanded to include the entire Project site and all activities. Given the terrain of the study area contains many blind spots for caribou to be hidden from surveyors, the Proponent should increase the amount of surveys to account for this challenge.</p>	
<b>SUGGESTIONS AND RECOMMENDATIONS</b>	
<p>Caribou can be within ear shot of drilling activities and associated noise disturbance, but can be out of visual sight if the terrain is very hilly. Extra precautions, such as more caribou surveys, should be taken in hilly terrain to avoid noise disturbance considering that caribou may be present. In addition, Dolphin and Union caribou are known to form small groups of 10-15 individuals. The threshold for suspending activities should be lowered from 50 caribou to 12 caribou, considering the behavior and group sizes characteristic of the Dolphin and Union herd.</p>	
<b>ADDITIONAL COMMENTS</b>	
N/A	

<b>GN-05: Caribou group size</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Subject/Topic</b>	Threshold of suspension of activities — caribou group size
<b>References</b>	Environnement Management Plan, section 4.2.3.2 page 8
<b>CONCERNS</b>	
The proponent should clarify the specific caribou herd that is within the project area.	
<b>SUGGESTIONS AND RECOMMENDATIONS</b>	
<p>The project area is within an important wintering and spring migration area of the Dolphin and Union caribou.</p> <p>The proponent provides a list of mitigation measures, but has not fully described how wildlife monitoring will consider and incorporate the baseline environmental conditions during the early phase of the project.</p> <p>Barren-ground caribou are assessed as threatened by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). The Bathurst caribou herd, with a population of 20,000, is a species of the barren-ground caribou and had a historic range extending to Kent Peninsula and within the project area. Although the current range of the Bathurst caribou herd does not overlap with the proposed project location, because of its historic range a sighting of Bathurst caribou can be possible in the project area.</p> <p>The Dolphin and Union caribou herd was assessed as a species of special concern by COSEWIC in 2004, and was up-listed under Part 4 of Schedule 1 of the federal <i>Species at Risk Act</i> (SARA) in 2011 and on the Northwest Territories List of Species at Risk as a species of “special concern” in 2014. The Dolphin and Union caribou use the area within the Arcadia Bay property intensively during the spring migration and as wintering area. Any activity from November to May is likely to coincide with the Dolphin and Union herd, and any potential impacts to the caribou and their habitat should be mitigated.</p>	
<b>ADDITIONAL COMMENTS</b>	
N/A	

<b>GN-06: Bears, wolves, and wolverines</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Subject/Topic</b>	Threshold of suspension of activities- caribou group size
<b>References</b>	Environnment Management Plan, section 4.2.3.2 page 8
<b>CONCERNS</b>	
The proponent should be aware of the frequency of occurrence of other species not emphasized in the project area.	
<b>SUGGESTIONS AND RECOMMENDATIONS</b>	
The mitigation and monitoring measures should be revised and emphasized for Grizzly Bear, Wolf, and Wolverine.	
<b>ADDITIONAL COMMENTS</b>	
The Proponent should be in contact with the Government of Nunavut Wildlife Deterrent Specialist, Mike Harte, to have additional information on specific deterrent programs. Mike Harte can be contacted through the following: tel (867)934-2065 or email: mharte@gov.nu.ca	



<b>GN-07: Muskox</b>	
<b>Department</b>	Environment
<b>Organization</b>	Government of Nunavut
<b>Subject/Topic</b>	Lack of monitoring and mitigation measures for moose and muskox
<b>References</b>	Environnement Management Plan
<b>CONCERNS</b>	
The project area is located within moose and muskox habitat. These two species have not been considered in the Environmental Management Plan.	
<b>SUGGESTIONS AND RECOMMENDATIONS</b>	
The proponent should take moose and muskox into consideration and develop a monitoring and mitigating section for each of these species.	
<b>ADDITIONAL COMMENTS</b>	
N/A	