

January 14, 2018

Jaida Ohokannoak
Technical Advisor II
Nunavut Impact Review Board
P.O Box 1360
Cambridge Bay, NU X0B 0C0

Sent VIA Email: info@nirb.ca

RE: Comment Request for the City of Iqaluit’s “New Landfill and Waste Transfer Station” project proposal (NIRB File No. 13UN034)

Dear Jaida Ohokannoak,

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 the City of Iqaluit's "*Iqaluit Landfill*" project proposal.

The GN has concluded that the proposal is missing several documents which are viewed as fundamental in completing an effective internal review. This includes (1) a comprehensive geotechnical survey, (2) climate change projections, (3) additional details of project design, including operation and closure, and (4) a wildlife mitigation and monitoring plan.

The rationale for the inclusion of these documents is largely based upon the potential impacts the project may pose to the surrounding environment and wildlife. Please refer to the attached Appendix for further details.

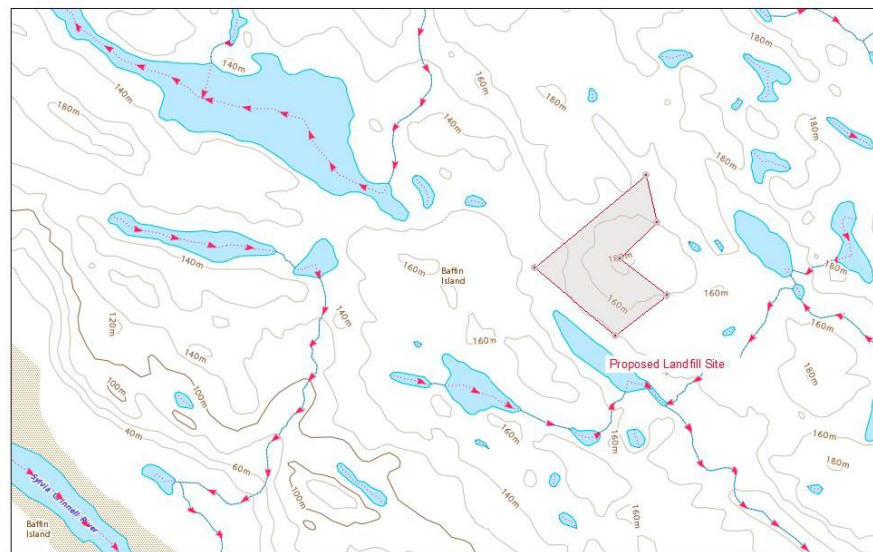
The GN suggests that the missing information is necessary in order for the Board to conduct its screening. Accordingly, the GN asks that the NIRB exercise its power to request additional information from the Proponent pursuant to s. 144(1) of the NuPPAA.

Should you have any concerns, please contact me by phone at 867-975-7808 or by email at cspencer@gov.nu.ca.

Qujannamiik,

[Original Signed By]
Chris Spencer
Avatiliriniq Coordinator
Government of Nunavut

GN-01: Landfill Site Hydrology, Analysis, and Design	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Landfill Site Hydrology, Geotechnical Survey, and Project Specifications
References	<ul style="list-style-type: none"> • NIRB Application for Screening # 125346 – New Landfill and Waste Transfer Station • Desktop Geotechnical Study - Landfill - Final • Natural Resources Canada (2018). The Atlas of Canada – Toporama. Retrieved from http://atlas.gc.ca/toporama/en/index.html • NIRB Application for Screening # 125406 – Concept Advancement for a Raw Water Intake
CONCERNS	
<p>Project design The project description is there is also insufficient information provided regarding facility siting (setbacks), design (liner, filtrate management, regular cover), operation and closure.</p> <p>Watershed hydrology The Proponent has yet to complete a geotechnical survey of the proposed landfill site. The results of a such a study would offer invaluable insight into the characteristics of the local groundwater flow regime.</p> <p>The landfill site is located 4.5km from the Sylvia Grinnell Territorial Park and the Sylvia Grinnell River. Natural Resources Canada (NRCAN) topographic mapping indicates that the landfill site is within close proximity (<800m) to the Sylvia Grinnell watershed (Figure 1). The Sylvia Grinnell River is of great importance to the people of Iqaluit through fishing, recreation, and drinking water. Contamination to this river would be severely detrimental to these activities. The Sylvia Grinnell River has also been examined as a potential source of drinking water for the municipality of Iqaluit as evidenced by NIRB screening 18YN046 in which Stantec Consulting Ltd conducted a field study looking at feasibility of drinking water intakes (Figure 2).</p> <p>The completion of a geotechnical survey would assist in clarifying the risk of constructing the landfill in relative proximity to the Sylvia Grinnell River watershed.</p>	



January 4, 2019


 Natural Resources Canada / Ressources naturelles Canada

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 Canada

Figure 1. Hydrological map of Landfill Area (Natural Resources Canada, 2018)

Climate change

The Proponent has not provided any future projections regarding the impacts of climate change to the project. The project application indicates that permafrost is likely to be impacted during the project construction phase. The loss of permafrost may not only impact subterranean hydrology, but could also be amplified by climate change processes. Additional information is required to assess these effects over the 75-year project life span.

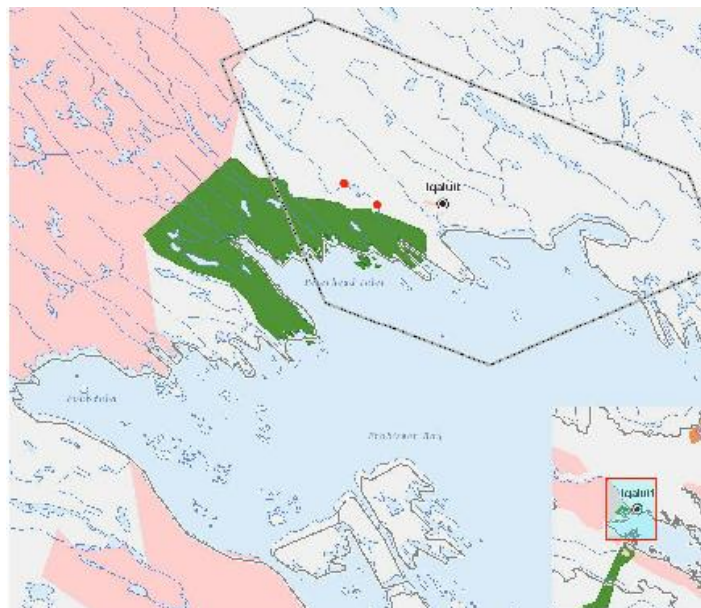


Figure 2. Map of Drinking Water Study Locations for Project 18YN046 (NIRB Application for Screening # 125406)

SUGGESTIONS AND RECOMMENDATIONS

The GN suggests that the missing information is necessary for the Board to conduct its screening. Accordingly, the GN asks that the NIRB exercise its power pursuant to s. 144(1), and direct the Proponent to provide the information described below:

- Comprehensive geotechnical survey
- Climate change projections.
- Project specifications that detail facility siting (setbacks), design (liner, filtrate management, regular cover), as well as detailed plans for operation and closure.

The Proponent has stated that:

“Drilling of boreholes as originally planned will be completed once freeze back has taken place.” (Desktop Geotechnical Study – Landfill – Final)

As of the time of this review freeze up has occurred. The GN therefore deems it reasonable that the Proponent complete this survey prior to approval to proceed under the NIRB process.

ADDITIONAL COMMENTS

N/A

GN-02: Wildlife Deterrence	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Wildlife Deterrence
References	NIRB Application for Screening # 125346 – New Landfill and Waste Transfer Station
CONCERNS	
<p>The Proponent's project application does not contain a wildlife deterrence and response plan. The only mention of keeping wildlife away from the site is contained in the main project application stating:</p> <p style="padding-left: 40px;">“[A]n electric fence will surround the site to help protect the site from wildlife.” (NIRB Application for Screening # 125346 – New Landfill and Waste Transfer Station)</p> <p>This statement is lacking in details for the specifics of the fence such as height and voltage. Due to the presence of organics and other wastes the landfill will produce smells likely to attract wildlife including predators such as polar bears. As such a wildlife deterrence and response protocol should be included with the project application and all employees educated on wildlife/predator response measures.</p> <p>The landfill site may be outside of cellular phone service. This may pose additional concern if employees cannot contact the local conservation officer or RCMP as the means of dealing with wildlife, including predatory animals. Response times of police or conservation officers will be lengthened as the employee would have to travel to a location with cellular service.</p>	
SUGGESTIONS AND RECOMMENDATIONS	
<p>The GN suggests that the missing information is necessary for the Board to conduct its screening. Accordingly, the GN asks that the NIRB exercise its power pursuant to s. 144(1), and direct the Proponent to provide the information described below:</p> <p>Wildlife Deterrence and Response Plan</p> <ul style="list-style-type: none"> - Wildlife Deterrence: <ul style="list-style-type: none"> o Additional details on the steps the Proponent will take to deter wildlife from interacting with the project - Predator Response: <ul style="list-style-type: none"> o Protocol once an animal is observed o What tools will be available to staff (e.g., bear bangers or shotgun) o Description of the reporting process for wildlife encounters o Education plans for staff 	

- Specifications of infrastructure used to deter wildlife (e.g., the electric fence)
- Communication capabilities of workers on site

The GN further recommends that the Proponent co-ordinate with the local wildlife conservation officers in dealing with their mitigation measures and response measures.

ADDITIONAL COMMENTS

All wildlife deterrence plans should be reviewed by and coordinated with the local conservation officer. Section 74(1) of the Nunavut Wildlife Act states “No person shall chase, weary, harass or molest a wild animal” Section 87(d) of the Act also states that “No person shall use a vehicle or other conveyance to harass wildlife”.

GN-03: Caribou Effects	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Caribou Interaction with the Project
References	<ul style="list-style-type: none"> • NIRB File 13UN034 Biophysical Assessment - Landfill - FINAL (EXP Oct 2018) • A. Gunn, Voles, lemmings and caribou—Population cycles revisited? Rangifer 23, 105–111 (2003).
CONCERNS	
<p>The Proponent's biophysical assessment includes evidence of the past use of the project site by barren-ground caribou. Section 3.2.3.1 states:</p> <p>“Caribou telemetry data from 1987 to 1994 for South Baffin Island was analyzed for Caribou seasonal movements and distribution. The results showed that during this period, Caribou late summer and fall migration, rut and winter range use overlapped with the Site.”(13UN034 Physical and Biological Assessment, P. 9)</p> <p>Further Section 3.2.3.1 states:</p> <p>“Barren-ground Caribou populations undergo natural fluctuations of low and high abundance; a 60 to 80-year cycle on Baffin Island has been proposed by Caribou researchers (COSEWIC, 2016) The presence of suitable forage (shrubs, grasses and sedges, lichen, mushrooms) and aged Caribou skeletal remains on the Site, supports that the Site was historically used by Caribou and provides suitable habitat for this species.”(13UN034 Physical and Biological Assessment, P. 9)</p> <p>The project is expected to have a 75 year life span and as such will be in operation through the completion of the mentioned caribou population cycles. Evidence suggests that North American caribou herds operate on cycles of 40 to 70 years (Gunn, 2003). Although the area is not used currently by caribou an increase in numbers has the potential to cause caribou to reutilize the area. As such the Project has the potential to cause detrimental effects to caribou movements and populations. The project should have an adequate wildlife mitigation and monitoring program (WMMP) in order to ensure non-significant impacts to caribou.</p> <p>Currently no mitigation or monitoring plan for wildlife exists for the project.</p>	
SUGGESTIONS AND RECOMMENDATIONS	
<p>The GN suggests that the missing information is necessary for the Board to conduct its screening. Accordingly, the GN asks that the NIRB exercise its power pursuant to s. 144(1), and direct the Proponent to provide the information described below:</p>	

- Protocols for road closure in the event of caribou migration through the project site
- Noise mitigation program and modelling for noise produced by the road and landfill site
- Prohibitions for hunting on the site
- Methods for detection of wildlife
- Design characteristics for the road that will allow for permeability to wildlife

The road should be designed in such a way as to not impede caribou movement (e.g., low profile with gently sloped shoulders).

ADDITIONAL COMMENTS

NA

GN-04: Health Assessment	
Department	Health
Organization	Government of Nunavut
Subject/Topic	Lack of Adequate Information for Public Health Assessment
References	<ul style="list-style-type: none"> • NIRB Application for screening # 125346 – New Landfill and Waste Transfer Station • Department of Health Letter, RE: Solid Waste Project – Iqaluit Conditional Approval, August 16, 2018 (attached)
CONCERNS	
<p>The Proponent has not yet responded to the Department of Health's August 16 2018 letter that states the Chief Medical Officer's conditional approval of this solid waste project. The Department of Health still requires the timely sharing of all technical documents and project specifications to verify conformity to the Public Health Act and General Sanitation Regulations.</p>	
SUGGESTIONS AND RECOMMENDATIONS	
<p>The Proponent is advised that several documents detailed in the attached letter remain outstanding by the Department of Health (DoH). These documents are required by the DoH prior to formal approval of the project.</p>	
ADDITIONAL COMMENTS	
N/A	

August 16, 2018

Erik Marko
Project Manager, Colliers Project Leaders
Suite 700, 150 Isabella Street
Ottawa, ON
K1S 1V7

RE: Solid Waste Project – Iqaluit Conditional Approval

Dear Mr. Marko,

This is a letter of conditional approval to proceed with the RFP and technical design of the new solid waste management facility for the community of Iqaluit. The Department of Health (Health) has no public health concerns with the conceptual proposal for the solid waste facility. The application at this time does not contain enough detailed information to allow for formal approval.

Approval is granted with the following conditions:

- Timely sharing of technical documents with provision for Health to review
- Conformity of the selected design to the Public Health Act and General Sanitation Regulations.
- Detailed design selection meeting best applicable design technology.

Your contact for this project is Greg Thibault, Regional Environmental Health Officer. He can be reached at 867-975-4817 or gthibault@gov.nu.ca

Sincerely,

W. Ball.

Dr. Kim Barker, MD, CCFP, MPH, FRCP(C)
Chief Medical Officer of Health
Department of Health

cc: Greg Thibault, Regional Environmental Health Officer