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Department of Community and Government Services Nunalingni Kavamatkunnilu Pivikhaqautikkut Ministère des Services Communautaires et gouvernementaux

Erika Zell Assistant Technical Advisor Nunavut Impact Review Board

November 17, 2015

Subject: Response to the comments made by NIRB on the Hamlet of Igloolik's "Igloolik Sewage Lagoon "project proposal; NIRB file no.15UN040 and NWB file no. 3BM-IGL 1520.

Dear Ms. Zell,

I am writing you to reply to the comments made on the letter to Senior Administrative Officer of the Hamlet of Igloolik dated October 28, 2015.

Please see below the responses to the comments and supporting documents.

- Responses to the Comments made by NIRB in the letter to the SAO, Hamlet of Igloolik dated October 28, 2015.
- Granular source survey and spill contingency plan of the Hamlet of Igloolik (screened by NIRB dated August 12,2013)
- 3. NIRB communication and Granular Resources
- Spill Contingency Plan for the operation of the existing lagoons Appendix-A: Map and location of the existing Sewage Lagoons Appendix-B: NT-NU Spill Report Form and instructions Appendix-C: Dust Control Procedure
- 5. Screening Report to Hon. Minister of CGS dated August 12, 2013
- 6. Screening report to Manager of Licensing, Nunavut Water Board dated August 20,2015

Please review these documents at your earliest convenience. We are ready to tender the Igloolik Sewage Lagoon Project for construction as soon as Amendment of the Hamlet of Igloolik Water Licence is issued. This is one of our top priority projects.



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I will appreciate to keep me in the loop for all the correspondences and approval process of this file.

Finally I appreciate for extending the submission date of the responses to this file until Nov.20, 2015. It is also noted that Mr. Brain Fleming is no longer SAO of the Hamlet of Igloolik. New SAO's name is Gordon Win.

Thanks

Bhabesh Roy, M.A.Sc., P.Eng.

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Copy: Ralph Ruediger, Director of Community Development, GN-CGS
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Murray Heath, Acting Director, Infrastructure, GN-CGS
Grigor Hope, Acting Baffin Regional Project Manager, GN-CGS
Gordon Win, Senior Administrative officer, Hamlet of Igloolik

Response to NIRB: Amendment WL application of the Hamlet of Igloolik

Associated quarrying activities

Comment 1: In the Design Brief, references to E1 and N1 are noted as the preferred sources of quarry material for the upgrading of the sewage lagoon, however in the NIRB forms, it is unclear if the quarries E1 and N1 have been previously screened by the NIRB. Clarification is therefore required as to whether the E1 and N1 quarry sites have been previously assessed by the NIRB, and if so please provide any associated NIRB file numbers. It should be noted that if the impacts of any component of a project proposal that were not previously screened may be considered a significant modification to the project and change to the original scope of the project.

Response 1: The quarry sources E1 and N1 were screened by NIRB, file reference is 13QN030 dated August 12, 2013.

Comment 2: If a new quarry area is being proposed solely to complete the undertaking of this proposal, further information is required on the amount and type of granular materials to be extracted and the location of pits that are to be sourced from the E1 and N1 quarry sites discussed in the Design Brief. A NIRB Part 2 form outlining the quarrying activity would be required if the activity had not yet been assessed.

Response 2: No additional quarry site is proposed. The attached NIRB screened quarry resources Report of the Hamlet of Igloolik which is self-explanatory and satisfies this comment.

Use of existing access roads

Comment 3: Clarification is required on whether existing roads to the quarry and sewage lagoon sites will be used, and that there will be no construction of new roads (winter or all-season).

Response 3: The existing roads will be used for access to the sewage lagoon and quarry sites. There will be no construction of new roads

Installation of liners beneath exfiltration cells

Comment 4: Confirmation is required as to whether an impervious liner will be installed beneath all new and existing sewage exfiltration cells. The details of this component were discussed as a preferred option in the Design Brief, but not confirmed.

Response 4: The new sewage lagoon and rehabilitated sewage lagoons will be constructed with a liner and will be impervious lagoons

Plans and other documentation

Comment 5: During the comment period AANDC noted that the Spill Contingency Plan submitted was specific to quarries and did not include the conversion of sewage cells. An updated Spill Contingency Plan should be provided which includes current project proposal activities and contingencies to manage potentially hazardous was spills from the lagoon.

Response 5: The Hamlet is currently following the standard spill reporting and management guidelines. The spill contingency plan for the existing sewage lagoons is attached. Once the construction of the lined sewage lagoons is complete, a design specific spill contingency will be prepared and submitted as part of the O& M manual.

Comment 6: Further information is required regarding the anticipated generation of hazardous waste which is referenced in the application, and how this would be occurring related to the construction and operations of the new sewage lagoon facility, and the Proponent's plan to remove and process hazardous waste that is generated.

Response 6: Section 6 of NIRB Application "Sewage Lagoon of the Hamlet of Igloolik" dated August 31, 2015 references Hazardous Waste. As per the application an unknown projected amount of hazardous waste will be generated. Any hazardous waste generated will be stored in a sea can and treated at a landfarm.

Hazardous waste may result from berm and sludge removal from the current lagoons. Any berm material that may be required to be removed from site will be tested and treated appropriately. Sludge will be transferred to the existing cell #4 (adjacent to the current lagoons) and will be treated through the natural freeze thaw cycle.

Comment 7: Provide additional reports referenced in the Design Brief including: the geothermal report, geothermal analysis report, vegetated filterstrip wetland report, and associated environmental assessment reports.

Response 7: All the reports were submitted except Environmental Assessment, which is not required by NIRB.

NIRB confirmation is attached.

Wildlife and wildlife habitat

Comment 8: During the comment period AANDC has recommended that an updated wildlife survey of the borrow areas to ensure that there is no damage to wildlife habitat during quarrying or other project related activities. If the quarrying activities have not yet been assessed by the NIRB, please provide additional information on how this would be considered at the time of the assessment. If the quarrying activities have been previously assessed, please provide a general indication on if wildlife surveys are required in the management of those areas.

Response 8: The quarrying actives have been assessed by NIRB (File Reference 13QN030) and wildlife surveys are not required. The recommended Project-Specific Terms and Conditions in the 13QN030 Screening Decision Report will be followed. Please see attached Screening Decision Items 16, 17 and 18.

Noise and dust

Comment 9: Further information is required on what measures will be taken to mitigate the impacts of noise and dust levels as a result of constructed-related activities.

Response 9: The site is approximately 1000m from the nearest residence. We do not believe any special measures need to be implemented to address noise and dust. However, Hamlet follows the standard practice of dust control procedure which is attached.



From: Tara Arko [mailto:tarko@nirb.ca] Sent: Friday, November 13, 2015 1:58 PM

To: Roy, Bhabesh

Subject: RE: Igloolik Design Brief

Hi Bhabesh.

From your referencing advice that Jaida previously provided and the emails below, I'm not clear on what question you are expecting to be answered.

I can confirm that, as noted below, CEAA does not apply in Nunavut as of the 2008 NLCA amendment.

The projects that would be exempt from the requirement of screening are clearly noted in the 2007 GN-NIRB agreements that you and I have previously discussed.

I have not had time to review the brief in detail, but would note that we are currently screening the Hamlet of Igloolik's sewage lagoon expansion as it involves the construction of a new module. I have attached the most recent correspondence related to that file, and we are looking to take it to the board after the information clarification is received.

Tara

From: Roy, Bhabesh [mailto:BRoy@gov.nu.ca]

Sent: November-13-15 11:42 AM To: Tara Arko (tarko@nirb.ca) Subject: FW: Igloolik Design Brief

Tara
Please the e-mail below.
Thanks.
Bhabesh

From: Mentink, Erin

Sent: Friday, November 13, 2015 11:25 AM

To: Roy, Bhabesh

Subject: FW: Igloolik Design Brief

From: Mentink, Erin

Sent: September 16, 2015 12:27 PM

To: Roy, Bhabesh

Cc: Heath, Murray; Hope, Grigor; Lywood, Justine

Subject: RE: Igloolik Design Brief

Bhabesh,

Attached is the Final Design Brief dated Nov 2014. But the second paragraph of Section 3.5 is still the same

The Hamlet is the proponent of the project and as such triggers the requirement for a screening le environmental assessment for the project under Section 5(1)a of the Canadian Environmer Assessment Act (CEAA). Due to the size and location of the proposed project (leaving a footprint > m²), it cannot be excluded under CEAA, and an environmental assessment as per CEAA must completed prior to any physical work completed by the proponent. The GN is the Responsible Autho (RA).

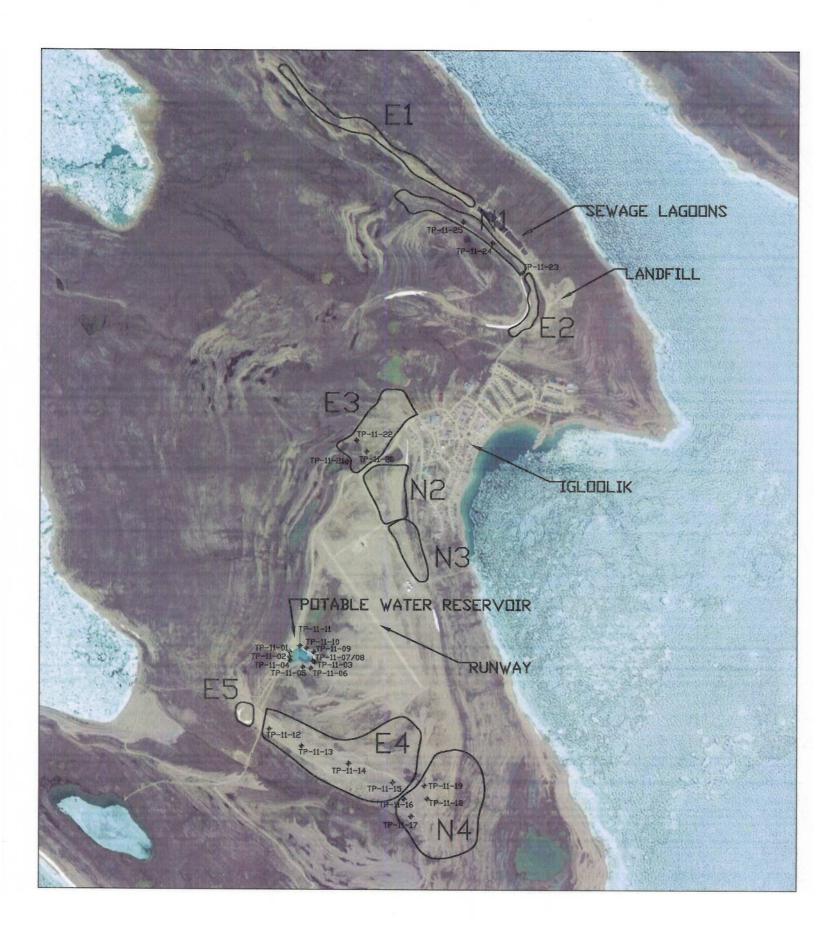
This paragraph should have been updated to better reflect the previous conversations we had with exp. Again, their CCO on July 15, 2014 discusses that this report is obsolete and CEAA no longer applies in Nunavut.

As part of the CCO, **exp** recommends that the above reports be reviewed and re design horizon. The exception to this would be the Screening Level Environment Changes to the Canadian Environmental Assessment Act have made the SLEA it is unknown whether there is a requirement for an Environmental Assessment (If it is determined an EA is required **exp** will provide a separate price for its comp

It was confirmed that an EA was not required in the email from NIRB on May 26, 2014 that CEAA does not apply and quote "This clarifies that in the Nunavut Settlement Area (Nunavut) CEAA does not apply. Environmental Assessment is conducted by the Nunavut Impact Review Board (NIRB) under Article 12 of the NLCA." (in an email from NIRB-attached).

This is why we did not spend the money to have this report finalized. There is no requirement in the NIRB application that states an EA conducted by a consultant is necessary. All the information you need to complete the NIRB application is within the draft report.

Erin



Igloolik Granular Source Survey - Location Coordinates

		Latitude			Longitude		Decimal Degrees	Degrees
Source	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	Latitude	Longitude
E1	69	23	48.58	81	48	53.05	69.39682778	81.81473611
E2	69	23	9.1	81	47	7.62	69.38586111	81.78545
E3	69	22	39.74	81	48	51.65	69.37770556	81.81434722
E4	69	21	16.15	81	49	19.32	69.35448611	81.82203333
E5	69	21	27.61	81	50	26.43	69.35766944	81.840675
Z	69	23	28.45	81	47	50.59	69.39123611	81.79738611
N2	69	22	24.54	81	48	44.6	69.37348333	81.81238889
N3	69	22	11.75	81	48	39.48	69.36993056	81.81096667
N4	69	21	3.33	81	48	12.86	69.350925	81.80357222

Note: Coordinates provided represent the approximate centres of the areas covered by each granular source.

GRANULAR SOURCE SURVEY AND SPILL CONTINGENCY PLAN MUNICIPALITY OF IGLOOLIK, NUNAVUT



P.O. Box 242, Gjoa Haven Nunavut Canada, X1B 1J0 Tel: 867.446.0036 Fax: 866.475.1147

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Table 2 - Comparison table for granular source areas in Igloolik, Nunavut

N4	N3	N2	Ŋ	E5	E4	E3	E2	E	Granular source ID
4.0 km	1.0 km	0.8 km	1.0 km	2.7 km	2.7 km	0 km	0.7 km	2.7 km	Distance from the community
High (273,000 m ³)	Low (49,000 m ³)	Moderate (63,000 m ³)	High (100,000 m³)	Low (18,000 m ³)	High (336,000 m ³)	Moderate (66,500 m ³)	Low (12,800 m ³)	Moderate (52,000 m ³)	Estimate volume available
Gravels	Cobbles and gravels	Cobbles and gravels	Sandy gravels	Boulders, cobbles and gravels	Cobbles and gravels	Gravels	Gravels	Sandy gravels	Predominant Grain Size
Fair	Very good	Very good	Very good	Very good	Good	Very good	Very good	Very good	Site access
Fair to Good	Moderate	Moderate	Moderate	Very Good	Good	Fair to Good	Fair to Good	Good	Surface and groundwater considerations
Low to Moderate	Low to Moderate	Low to Moderate	Moderate	Low	Low	Low	Low	Low	Environmental impacts associated with development
Good	Fair	Fair	Poor to Fair	Fair	Good	Good	Fair to Good	Good	Topography
Low	Moderate to High	Moderate to High	Moderate to High	Low	Low	Low to Moderate	Low	Low	Closure Requirements