



Environmental Protection Operations Directorate
Prairie & Northern Region
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Yellowknife, NT X1A 2P7

ECCC File: 6420 000 010/002
NWB File: 8BW-ANU----

June 8, 2023

via email at: licensing@nwb-oen.ca

Richard Dwyer
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Dear Richard Dwyer:

RE: 8BW-ANU----- – Nunavut Nukkiksautit Corp. (NNC) represented by Growler Energy – Anuriqjuak Nukkiksautit Project – Water Licence Application

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Water Board (NWB) regarding the above-mentioned water licence application.

ECCC provides expert information and knowledge to project assessments on subjects within the department's mandate, including climate change, air quality, water quality, biodiversity, environmental preparedness and emergencies. This work includes reviewing proponent characterization of environmental effects and mitigation measures, and providing advice to decision makers on activities needed to mitigate these environmental effects. Any comments received from ECCC in this context does not relieve the proponent of its obligations to respect all applicable federal legislation.

The following comments are provided:

1. Spill Response

Reference(s)

- Section 5.2.2 Spill Kit Contents, Anuriqjuak Nukkiksautit Project: Spill Prevention & Response Plan

Comment

In Section 5.2.2 of the Spill Prevention & Response Plan, it is indicated that the spill kit will contain 4 Tyvek splash suits and 4 pairs of chemical gloves. From the information presented, is unclear for how many persons the kit is meant for, and if there are additional



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suits and gloves on hand should the spill response require more manpower. Furthermore, it is unclear if the splash suits are flame retardant.

ECCC Recommendation(s)

Given that a response to a fuel spill is included in the plan, it is recommended that the Tyvek splash suits be flame-retardant. It is further recommended that the spill kits contain additional splash suits and gloves in case more manpower is required for the response, and in case of damage.

2. Acid Rock Drainage and Metal Leaching

Reference(s)

- Section 2.6.1 Access Road/Laydown Areas Construction, Biophysical Impact Assessment, High Displacement Renewable Energy Project, Final Report, Sanikiuaq, NU, Project # TAV1989301

Comment

Based on the information provided in the plan, it is unclear if the prospective borrow material and gravel has been tested to confirm these materials will be non-acid generating and non-metal leaching. Road construction materials should be tested and screened for heavy metals and acid rock drainage potential during borrow source selection.

ECCC Recommendation(s)

ECCC recommends conducting geochemical testing on potential borrow sources and using the results to screen for metal leaching and acid rock drainage (ML/ARD) potential. Ensure the materials used for road and instream construction will not be susceptible to acid rock drainage or metal leaching.

3. Erosion and Sediment Control

Reference(s)

- Section 9. Description of Undertaking, General Water Licence Application, Anuriqjuak Nukkiksautiit Project
- Table 6-1 Summary of Construction Phase Environmental Impacts, Mitigation Measures and Residual Effects, Biophysical Impact Assessment, High Displacement Renewable Energy Project, Final Report, Sanikiuaq, NU, Project # TAV1989301
- Section 9.3 Additional Monitoring Plans, Anuriqjuak Nukkiksautiit Project, Project Proposal, Document Number SAN-PMT-RP-020
- Section 4. Public Comments and Concerns, Screening Decision Report, NIRB File No. 22XN052

Comment

The proposed project involves construction of an access road by upgrading and extending an existing trail, and constructing three culvert watercourse crossings. Construction of a road and associated water crossings, have the potential to cause sedimentation in nearby waterbodies and changes to sediment quality. Therefore, it is important that appropriate erosion and sediment control (ESC) measures be identified prior to initiating construction. The effectiveness of ESC measures should be monitored regularly during construction and appropriate response actions guided by an ESC response framework.

ECCC Recommendation(s)

ECCC provides the following recommendations regarding ESC to be incorporated into the impending Environmental Protection Plan:

- (i) Apply appropriate ESC measures for road construction, instream construction, borrow sites and any other applicable locations.
- (ii) Monitor for potential signs of erosion and sedimentation and the effectiveness of ESC measures.
- (iii) Develop and implement an ESC Response Framework to identify and address potential signs of erosion and sedimentation and any concerns regarding ESC measures.
- (iv) Determine the details for ESC measures, monitoring, and ESC Response Framework prior to initiating construction.

4. Water Quality Monitoring

Reference(s)

- Section 9.3 Additional Monitoring Plans, Anuriqjuak Nukkiksautiit Project, Project Proposal, Document Number SAN-PMT-RP-020
- Section 4. Public Comments and Concerns, Screening Decision Report, NIRB File No. 22XN052

Comment

Section 9.3 details that a Monitoring and Management Plan for water quality will be developed as part of the Project Execution Plan. ECCC notes that water quality monitoring during instream construction typically involves the establishment of a site-specific total suspended solids (TSS)/turbidity regression curve to support the surrogate monitoring of TSS using field turbidity data. However, given the logistical challenges in establishing a site-specific regression curve at this remote location within a short construction window, a different approach may be needed. As an alternative, monitoring results could be compared against turbidity triggers rather than TSS triggers, as this will provide a real-time result and not rely on laboratory analysis. Monitoring details for instream construction should be determined prior to initiating construction.

ECCC Recommendation(s)

ECCC provides the following water quality monitoring recommendations for instream construction, to be incorporated into the impending Environmental Protection Plan:

- (i) Conduct water quality monitoring during instream construction using an upstream/downstream sampling approach that incorporates QA/QC measures and standard best practices.
- (ii) Supplement field turbidity measurements with periodic confirmatory TSS sample collection and laboratory analyses.
- (iii) Develop and implement a Water Quality Response Framework that includes thresholds for action and associated response actions to prevent adverse impacts on the aquatic environment. Compare monitoring results to framework thresholds and respond accordingly.
- (iv) Following completion of instream construction, conduct subsequent monitoring, as appropriate, to confirm stability and acceptable water quality.

5. ECCC Screening Comments

Reference(s)

- Section 4. Public Comments and Concerns, Screening Decision Report, NIRB File No. 22XN052

Comment

Section 4 of the NIRB Screening Decision Report details ECCC's comments in the original project screening. ECCC has been working with the Proponent and its representatives over the past few months, in efforts to resolve these comments. ECCC will continue to provide guidance and support to the Proponent and its representatives, in order to resolve the remainder of the outstanding comments detailed in the NIRB Screening Decision Report

ECCC Recommendation(s)

N/A – for information only

If you need more information, please contact Stephinie Mallon at Stephinie.Mallon@ec.gc.ca.

Sincerely,

[original signed by]

Stephinie Mallon
Environmental Assessment Officer

cc: Melissa Pinto, Acting Head, Environmental Assessment North (NT and NU)