



Water Resources Division
Resource Management Directorate
Nunavut Regional Office
918 Nunavut Drive
Iqaluit, NU, X0A 3H0

Your file - Votre référence
2AM-BRP1831
Our file - Notre référence
GCDocs#126511270

June 25, 2024

Richard Dwyer
Licensing Administrator
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B 1J0
Email: licensing@nwb-oen.ca

**Re: Crown-Indigenous Relations and Northern Affairs Canada's Review of the
MLA Phase 3 Tank 5 Modification, Type A Water Licence No. 2AM-BRP1831**

Dear Richard,

Thank you for the June 4, 2024, invitation to review the MLA Phase 3 Tank 5 Modification, submitted by B2Gold Nunavut, for its Type "A" Water Licence No. 2AM-BRP1831.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the application pursuant to its mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Crown Indigenous and Northern Affairs Act*. Please find CIRNAC comments and recommendations in the attached Technical Memorandum.

If there are any questions or concerns, please contact me at LeeAnn.Pugh@rcaanc-cirnac.gc.ca or (867) 975-4751 or Andrew Keim at (867) 975-4550 or Andrew.Keim@rcaanc-cirnac.gc.ca.

Sincerely,

Lee Ann Pugh
Regional Water Coordinator



Technical Review Memorandum

Date: June 25, 2024

To: Richard Dwyer, Licensing Administrator, Nunavut Water Board

From: Lee Ann Pugh, Regional Water Coordinator, CIRNAC

**Re: Crown-Indigenous Relations and Northern Affairs Canada's Review of the
MLA Phase 3 Tank 5 Modification, Type A Water Licence No. 2AM-BRP1831**

Region: ☒ Kitikmeot ☐ Kivalliq ☐ Qikiqtani

A. Background

The Back River Project (Project) is a gold project located within the West Kitikmeot region of south-western Nunavut. It is situated approximately 400 kilometers southwest of Cambridge Bay, 95 km southeast of the southern end of Bathurst Inlet, and 520 km northeast of Yellowknife, Northwest Territories. This project is located predominantly within the Queen Maud Gulf Watershed. The Project is comprised of two main areas with interconnecting winter ice roads: Goose Property and Marine Laydown Area (MLA), which is situated along the western shore of southern Bathurst Inlet.

The MLA continues to evolve as a port location that, in combination with the winter ice road, is utilized for the majority of the property's annual resupply, including fuel. Fuel is typically brought in towards the end of the summer months and stored in the MLA Tank farm.

B2 Gold Nunavut has presented the outlined Modifications to its MLA Tank Farm, and provided an overview of the facility background, design criteria, and the engineering design drawings (Issued for Permit – IFP). The modification pertains to Phase 3 expansion (addition of Tank 5, 18.34 ML tank) into the tank farm. Tank 5 is proposed to be placed on a bedrock/ blasted surface on the east side of the existing tank farm (east of Tank 4).

CIRNAC provides the following comments and recommendations pertaining to the application package. A summary of the subjects of recommendations can be found in Table 1. Documents reviewed as part of this submission can be found in Table 2 of Section B. Detailed technical review comments can be found in Section C.



Table 1: Summary of Recommendations

Recommendation Number	Subject
R-01	Construction Materials
R-02	Reclamation Security
R-03	Contact Water
R-04	Surveys
R-05	Management Plans

B. DOCUMENTS REVIEWED AND REFERENCED

The following table (Table 2) provides a list of the documents reviewed under the submission and reference during the review.

Table 2: Documents Reviewed and Referenced

Document Title	Author, File, No., Rev., Date
MLA Phase 3 Tank 5 Modification Request	B2Gold Nunavut, May 28, 2024

C. RESULTS OF REVIEW

1. Construction Materials

Comment:

Section A of the modification report states that the Phase 3 expansion includes the addition of an 18.34 ML fuel tank to be placed on a bedrock/blasted surface on the east side of the existing tank farm.

Section B states, *“The tank foundation pad will have a minimum total thickness of 900 mm of compacted crushed rockfill, which includes the liner system. The tank will be placed on top of the min 350 mm thick pedestal (placed on top of the compacted crushed rockfill) with a min 2m shoulder (pedestal offset) surrounding the tank and have side slopes of 2H:1V sloping away from the tank. The pedestal will also contain an additional 2 m wide fill on the northwest side of the tank that will consist of coarser rockfill.”*

CIRNAC notes that the source and composition of the crushed rockfill is not provided in the modification report.



Recommendation:

(R-01) CIRNAC recommends that B2Gold Nunavut provide information on:

- a) The source and composition of the crushed rockfill to be used to build the tank foundation pad. The crushed rockfill is must be made up of only non-acid generating materials.
- b) Ensure ongoing testing during construction must be maintained to ensure that the possibility of leaching from acid generating rock or minerals is minimized throughout the construction phase.

2. Reclamation Security

Comment:

With the proposed addition of the Phase 3 construction of the 18.34 ML fuel tank located at the Tank Farm, there may be a requirement to amend the reclamation security estimate currently held.

Recommendation:

(R-02) CIRNAC recommends that B2Gold Nunavut provide information/estimates to the Board on how the construction of Tank 5 at the tank farm may impact the current reclamation security estimates.

3. Contact Water

Comment:

Section A of the modification report states, *“Due to melting snow that accumulates over the winter and precipitation, contact water will be collected inside the secondary containment berms. During visual inspections, the quantity of contact water collected inside the secondary containment berms will be evaluated. If there is a visible sheen on the contact water or if water withdrawal is deemed necessary, water samples will be collected and analyzed. Accumulated water will be released into the receiving environment only if it meets discharge criteria.”*

Part D, Item 21 of 2AM-BRP1831 defines contact water as, *“...any water that may be physically or chemically affected by mining activities, including runoff and seepage from WRSA, Ore Stockpiles and other mine facilities.”*



Recommendation:

(R-03) CIRNAC recommends that B2Gold Nunavut provide information on the management of all contact water collected inside the secondary containment berms, including the discharge criteria to be used to determine if the water will be released into the receiving environment.

4. Surveys

Comment:

In Appendix A, B2Gold has provided permit drawings for the construction of Phase 3 and the addition of Tank 5. On each drawing provided, there is an area in proximity to the construction site that states, *“no survey data is available for the area.”* There is potential for adverse impacts to this and adjacent areas including nearby waterbodies.

Recommendation:

(R-04) CIRNAC recommends that B2Gold survey this area and provide the results and/or information in its next Annual Report.

5. Management Plans

Comment:

Due to the proposed construction of Phase 3 and the addition of Tank 5 to the existing tank farm, changes will be required to the applicable approved Management Plans.

Recommendation:

(R-05) CIRNAC recommends that B2Gold review and update all applicable management plans related to this undertaking.