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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File: 2AM-BRP1831 / D2

March 19, 2026

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RE: Type A Water Licence No: 2AM-BRP1831 for the Back River Project; B2Gold Nunavut; Design Report for Umwelt Saline Water Pond (SWP) Dam, Phase 1

Dear Mr. LeGoffe:

On November 14, 2025, the Nunavut Water Board (NWB or the Board) received a Design Report and drawings from B2Gold Nunavut (B2Gold or Licensee) for the Umwelt Saline Water Pond (SWP) Dam. This notification is required under Part D, Item 2 of the type A Water Licence 2AM-BRP1831.

B2Gold have stated that the current plan is to construct the Umwelt SWP in three phases. This report is for the Phase 1 dam. The design for Phases 2 and 3 will be completed later in 2026.

The Umwelt SWP is planned to be used to store saline water from the Llama, Umwelt, and Goose Main underground mines, and brine from the future water treatment plant, and in general to assist with and integrate into the overall site water management plans and systems. To achieve the required capacity (3.4 Mm³), the pond will exceed and encompass the existing Umwelt Lake footprint, and will expand to include additional area immediately around Umwelt Lake.

B2Gold plans to complete Phase 1 before receiving saline water inflows that are expected to be encountered in the lower elevations of Umwelt and Llama underground development, and which will ultimately be pumped to and managed on surface. Based on current mining projections the first occurrence of saline water may be encountered in the mining sequences by as early as Q3 2026.

Construction activities are planned to be completed allow for increased water management capabilities on site by Q3 2026.

On November 14, 2025, the NWB distributed the Design Report for a public review, parties were invited to submit comments by December 12, 2025. Submissions were received from the Kitikmeot Inuit Association (KIA), Crown-Indigenous Relations and Northern Affairs (CIRNA),

Environment and Climate Change Canada (ECCC) and Fisheries and Oceans Canada (DFO) by the deadline of December 12, 2025. ECCC and DFO, in their submissions, stated that they had no comments or concerns at this time.

B2Gold replied to interveners' recommendations on January 6, 2026. The KIA requested an extension until February 13, 2026, to review B2Gold's responses. On February 11, 2026, the KIA confirmed that their concerns were addressed. The NWB sent reminders to CIRNA on February 19, 2026 and March 17, 2026, to provide their response. On March 17, 2026, CIRNA confirmed that their concerns were addressed.

Below is a summary of comments received:

Kitikmeot Inuit Association (KIA)

1. The KIA requested justification for the material properties used in the stability analysis considering findings from the site investigation program completed in 2025.

Response: B2Gold stated that the material strength properties used in the slope stability analysis were based on Site-wide geotechnical design properties, Goose Property – 2018 Overburden Investigation, Geotechnical laboratory testing result of the fill material, Percolation test results, ongoing site monitoring and the design engineers' engineering judgment and past experience. B2Gold in their response, provided further discussion and included data with references.

2. The KIA recommended that B2Gold update the geothermal analysis, including coupled seepage, to confirm that the thermal design criteria are met, including that the liner is perennially tied into the frozen ground and not impacted by the growth of a talik, and that it sustains potential thaw strains in the foundation.

Response: B2Gold stated that the thermal modelling results have been updated and provided a memo attached to their response. B2Gold also stated that they will install passive thermosyphons to further improve the thermal performance of the SWP and extend the design life of this structure. Further B2Gold stated that the thermal performance of the SWP has been considered in detail and is a primary design consideration and driver for the design geometry and arrangements.

3. The KIA recommended that B2Gold evaluate the creep of the foundation, considering findings from the site investigation program completed in 2025, and assess whether the tensile strains acting on the geomembrane liner are tolerable.

Response: B2Gold stated that *“under Arctic and cold continuous permafrost conditions, the magnitude and rate of creep deformation in ice-rich permafrost soils are low (slow), and creep-related movements develop gradually over long periods. In the case of the SWP creep is therefore not considered a credible mechanism for rapid loss of shear strength or sudden instability for the initial SWP construction, and while contained volumes behind the dam are below one million cubic meters (i.e. Phase 1). Creep, however, is an important mechanism that needs to be monitored to ensure that this does not develop into an issue over the longer operational design life of the structure. Creep has been considered in the*

design and has, in part, resulted in the shallower design slopes seen in the SWP Phase 1 designs (i.e., shallow upstream slope of 4H:1V to 6H:1V)". B2Gold provided further discussion and rationale in their response stating that a summary of the SWP monitoring results will be included in the Annual Geotechnical Inspection report.

4. The KIA requested confirmation whether thermosyphons will be used.

Response: B2Gold confirmed that "Four sections of the thermosyphons are planned to be installed at the base of the key trench. Each section will consist of four evaporators, four inclined lateral pipes and four risers installed outside the dam footprint".

Crown-Indigenous Relations and Northern Affairs (CIRNA)

1. CIRNA requested the technical specifications for sedimentation and erosion controls to comply with the reporting requirements outlined in Part D, Item 3(e) of the Licence.

Response: B2Gold stated that "the main SWP Phase 1 key trench excavation will be done in the winter and will also allow for any 'dirty' snow around the areas immediate of the excavations to be removed and relocated upstream of the dam. The main foundation excavation work for the Saline Water Pond is specifically planned to be done in the winter and generally when ambient air temperatures are at or below -10oC. This is done to avoid the introduction of heat into the foundation, while also allowing for simpler and more readily completed sediment and erosion control measure to be implemented." Further B2Gold provided information about other general sediment and erosion control measures that will include erosion and sediment control, shoreline/bank re-vegetation and stabilization, and mitigation by operation of machinery.

2. CIRNA requested B2Gold to provide the results of its geochemical analysis of construction materials, to comply with Part D, Item 3(c) of the Licence, and clarify the criteria that is applied to the management of PAG materials.

Response: B2Gold acknowledged the discrepancy between the design report and the Waste Rock Management Plan stating that "To ensure a consistent and transparent application of criteria, B2Gold will adopt the more conservative triggers across both documents such for example is the classification of material where NP/AP is equal to 3 (NP/AP=3), B2Gold will opt for a more precautionary approach. While NP/AP greater than or equal to 3 is generally considered non-acid generating, site-specific field observations suggest that when the ratio is greater than or equal to 3, total sulfur content is the more reliable indicator of performance." B2Gold further discussed their approach and provided an attachment with the results of the geochemical analysis of construction materials, as well as the standard operating procedure (SOP) for Acid-Base Accounting.

Copies of all documents received in support of the Design Report can be accessed through the NWB's Public Registry and FTP site using the following Link:

[Design Report - Umwelt Saline Water Pond Dam, Phase 1](#)

NWB's Review and Decision

The NWB, having fully reviewed the Licensee's request in the context of potential impact of the proposed activities on the freshwater environment, and consistency of the proposed activity in relation to the scope of the Licence, determined that the proposed activity is consistent with the scope of activities considered under the Licence issued to the Project. Therefore, by way of this correspondence, the Board authorizes B2Gold to undertake the construction of the Umwelt Saline Water Pond (SWP) Dam.

Further, in keeping with Part D, Item 11 of the Licence's terms and conditions, the submission of post-construction information, including as-built plans and drawings, shall remain applicable to this authorization. The Board also advises that a Construction Summary Report should be provided as per Licence terms and conditions.

The Licensee is advised that the Board's review of this document is a verification that the proposed activity is consistent with the existing terms and conditions of the Licence and more specifically with Part D, and may proceed in accordance with the design specifics and drawings provided. It should be noted that the Board's acceptance is NOT intended or offered as any representation regarding the suitability of the plans nor third-party verification of the design, construction, planning or engineering discussed in the notice of construction and accompanying documents.

Should you have any questions regarding the above, please contact the NWB Licensing Department by email to licensing@nwb-oen.ca or by phone at (867) 360-6338.

Sincerely,



Mohammad Ali Shaikh
Technical Advisor,
Nunavut Water Board,

as/rqd

Cc: Distribution List – Back River