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

ECCC File: 6100 000 115/002
NWB File: 2AM-BRP1831

June 24, 2024

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: 2AM-BRP1831 – B2Gold – Back River Gold Mine – Marine Laydown Area (MLA) Tank Farm Modification Request

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Water Board (NWB) regarding the above-mentioned Marine Laydown Area (MLA) Tank Farm Modification Request.

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 proposed mitigation measures. We provide advice to decision-makers regarding a proponent's characterization of environmental effects, the efficacy of their proposed mitigation activities, and may suggest additional mitigation measures. 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. **Air Emissions Associated with Increased Fuel Transport from the Marine Laydown Area (MLA) to the Goose Bay Site**

   Reference(s)

   - Application for MLA Tank Farm Modification (Phase 3: Addition of Tank 5), B2Gold Nunavut, May 28, 2024

Comment

Section 1C: Operational Need for MLA Fuel Tank 5, indicates that an additional tank at the MLA is required because “increased power generation is required to ensure the safety of the underground mining team.” This also implies that greater traffic will likely occur on the winter ice roads, to bring more fuel to the Goose Bay site, and the potential for more trucks to brought to the Project sites.

ECCC appreciates the Proponent's commitment to reduce the carbon footprint of the Project, in part to the proposed development of the Back River Renewable Energy Centre. Adding newer trucks with engines meeting cleaner emission standards would contribute to the Proponent's efforts to reduce their carbon footprint.

ECCC Recommendation(s)

ECCC recommends that the Proponent, for additions to their fuel transport fleet, commit to seeking newer trucks with engines, meeting cleaner Tier 4 emission standards, where practicable and available.

2. Topic

Reference(s)

- Application for MLA Tank Farm Modification (Phase 3: Addition of Tank 5), B2Gold Nunavut, May 28, 2024
- Technical Specifications Earthworks and Geotechnical Engineering, Back River Gold Project, Nunavut Canada, Revision 02 – Issue for Construction, December 2022

Comment

Section 1A: Description of the Facilities and/or Works to be Constructed, of the Tank Farm Modification Application document, states that the “tank foundation pad will have a minimum total thickness of 900 mm of compacted crushed rockfill…” and that “Berms will be constructed with blasted rockfill sourced from the existing quarry…” Section 3.2.3: Excavation in Quarry Areas, and Section 4: Drilling and Blasting, of the Technical Specifications document, further detail that blasted rock materials will be sourced for construction.

ECCC is of the view that all blasted rocks to be used in construction of the beam or the foundation, be tested for their acid rock drainage/metal leaching (ARD/ML) potential, and notes that all rocks used for construction should be non-potential acid generating (NPAG) rocks.

ECCC Recommendation(s)

ECCC recommends that the Proponent test all blasted rocks to be used in construction of the beam or the foundation, for their acid rock drainage/metal leaching (ARD/ML) potential. ECCC further recommends that all rocks used for construction, be non-potential acid generating (NPAG) rocks.

3. Responsibility Under the Environmental Emergency (E2) Regulations

Reference(s)

- Note #6, MLA-QTFP3-101, Appendix A: Issued for Permit Drawings, Application for MLA Tank Farm Modification (Phase 3: Addition of Tank 5), B2Gold Nunavut, May 28, 2024
- Environmental Emergency Regulations, 2019 (link: https://laws.justice.gc.ca/PDF/SOR-2019-51.pdf)

Comment

With the construction of a new large reservoir of fuel, ECCC would like to bring to the attention of the Proponent, that a 'notice of change' may be required as stipulated in subsection 3(5) of the *Environmental Emergency Regulations*, 2019, which state:

"A responsible person must, within 60 days after the day on which any of the following situations occurs, submit an updated notice to the Minister that contains the information referred to in Schedule 2:

(a) the information that was reported under section 1 or 2 of Schedule 2 has changed;

(b) the maximum expected quantity that was most recently reported under paragraph 3(d) of Schedule 2 in respect of a substance has increased by 10% or more; or

(c) the maximum capacity that was most recently reported under paragraph 3(f) of Schedule 2 in respect of a container system, in which a quantity of a substance is contained, has increased by 10% or more."

ECCC Recommendation(s)

ECCC recommends that the Proponent submit an updated 'notice of change', if a situation covered under subsection 3(5) of the *Environmental Emergency Regulations* occurs.

4. Tank Security Features

Reference(s)

- Section 2A: Description of the Facilities and/or Works to be Constructed, Application for MLA Tank Farm Modification (Phase 3: Addition of Tank 5), B2Gold Nunavut, May 28, 2024
- Section 2D: Description of Any Monitoring Required, Including Sampling Locations, Parameters Measured, and Frequencies of Sampling, Application for MLA Tank Farm Modification (Phase 3: Addition of Tank 5), B2Gold Nunavut, May 28, 2024

Comment

Sections 2A and 2D of the Tank Farm Modification Application document, indicate that the secondary containment will be enlarged to a 67,000 m^3 capacity. It is not clear from the information presented, if the new reservoir will be equipped with essential safety features:

including corrosion protection, overfill protection, leak detection, or other measures that would reduce the risks of accidents and malfunctions. This information is necessary to ensure that appropriate measures are in place to mitigate potential environmental impacts from reservoir failures.

ECCC Recommendation(s)

ECCC recommends that the Proponent provide detailed information in the Tank Farm Modification Application document, on the safety features of the proposed new fuel tank.

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: Eva Walker, Head, Environmental Assessment North (NT and NU)