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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File: 2AM-MRY1325 / D17

July 24, 2020

Christopher Murray
Environmental & Regulatory Compliance Manager
Baffinland Iron Mines Corporation
Suite 300 – 2275 Upper Middle Road East
Oakville, Ontario, Canada L6H 0C3

Simon Fleury
Mine Manager
Baffinland Iron Mines Corporation
Suite 300 – 2275 Upper Middle Road East
Oakville, Ontario, Canada L6H 0C3

Email: christopher.murray@baffinland.com

Email: simon.fleury@baffinland.com

Subject: Licence No: 2AM-MRY1325; Construction Summary Reports for Waste Rock Water Treatment Plant and Mine Site Waste Rock Facility Pond Expansion and Drainage System

Dear Christopher Murray and Simon Fleury:

On May 25, 2020, Baffinland Iron Mines Corporation (Baffinland or Licensee) submitted the documents entitled “Construction Summary Report Mine Site Waste Rock Facility Pond Expansion and Drainage System” (Pond CSR) dated May 1, 2020 and “Construction Summary Report Waste Rock Water Treatment Plant” (WTP CSR) dated May 21, 2020 (collectively, Reports) to the Nunavut Water Board (NWB or Board) to comply with Part D, Item 17 of Water Licence No: 2AM-MRY1325 (Licence).

Copies of the Reports can be accessed through the NWB’s Public Registry and FTP site using the following link:

[ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-MRY1325%20BIMC/3%20TECH/5%20CONSTRUCTION%20\(D\)/](ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-MRY1325%20BIMC/3%20TECH/5%20CONSTRUCTION%20(D)/)

The NWB distributed the Pond CSR for public review and the WTP CSR for information on June 8, 2020. Comments¹ from Crown-Indigenous Relations and Northern Affairs (CIRNA) and Environment and Climate Change Canada (ECCC) were received.

CIRNA requested further clarification whether:

- As-built drawings included all available information;

¹ Crown-Indigenous Relations and Northern Affairs Canada, dated June 22, 2020; Environment and Climate Change Canada, dated June 29, 2020.

- Geotextile installation and testing were done appropriately; and
- Granular base material was selected properly.

ECCC recommended that:

- Baffinland include geotube decommissioning and disposal procedures into the interim closure and reclamation plan; and
- Baffinland discuss the issue of discrepancy between actual and predicted sulphate levels in the waste rock facility pond and if the sulphate concentrations can be decreased.

On July 7, 2020, the Licensee provided its response including:

- The confirmation that the as-built drawings are up-to-date;
- All seam tests for the pond geotextile were performed;
- “The areas of geotextile and membrane which were installed in winter had the snow accumulation removed to the bedding material prior to installation of the geotextile and membrane by both equipment and hand. A thin (1-3mm thick) hard packed residual layer of snow occasionally remained which would not affect the performance of the membrane system as determined by onsite Engineer”;
- The on-site Engineer and Geologist determined the quality of the granular material;
- Any pond sediment and sludge is considered to be and utilized as potentially acid generating; and
- Predictions for water quality are pre-treatment.

On July 15, 2020, CIRNA made a follow-up information request. On July 22, 2020, the Licensee submitted its follow-up response. On July 24, 2020, ECCC confirmed it had no further inquiries.

The Board has reviewed the Licensee’s submissions. In regards to the WTP CSR, the NWB notes the following:

1. The WTP CSR states: “When the geotubes are filled with sediments, they need to be replaced. To avoid interruption of water treatment process second geotube pond need to be build.”
2. Appendix D of the WTP CSR includes the *Phase 1 Waste Rock Management Plan* dated December 31, 2019 that was previously recommended by the Board for updates. The Board understands that the updated version was submitted by Baffinland for Board approval on June 16, 2020, and the review is ongoing.

In regards to the Pond CSR, the Board notes the following:

1. The diversion berm was converted to a perimeter access road.
2. The document acknowledges the requirement of a regular removal of sediment.
3. The Waste Rock Facility (WRF) Pond Site Checklists note that “subgrade is unacceptable as per project specifications”. The Pond CSR states, “(t)he subgrade surface conditions after September 28, 2019 were frozen and covered by a thin layer of ice/snow, and therefore, the suitability of subgrade surface for geomembrane installation could not be visually assessed.” The Pond CSR recommends geomembrane inspection take place during summer 2020. However, the Board notes the Licensee’s July 7, 2020 response to CIRNA in regards to the geomembrane installation stating that “(a) thin (1-3mm thick)

hard packed residual layer of snow occasionally remained which would not affect the performance of the membrane system as determined by onsite Engineer”.

Based on its review of the submitted documents the Board would like to request:

1. The Licensee submit within the 2020 Annual Report analysis or consideration whether a 2nd geotube pond is required; and
2. The NWB agrees with the Pond CSR recommendation for geomembrane inspection in summer 2020. The Licensee is reminded that geomembrane inspection is a requirement under Part D, Item 18 of the Licence.

Should you have any questions, please feel free to contact the undersigned at (867) 360-6338 or assol.kubeisinova@nwb-oen.ca at your earliest convenience.

Regards,

Assol Kubeisinova
Nunavut Water Board
Technical Advisor

cc: Distribution List – Mary River