

Environmental Protection Operations Directorate
Prairie & Northern Region
5019 52nd Street, 4th Floor
P.O. Box 2310
Yellowknife, NT X1A 2P7

ECCC File: 6100 000 009/011
NWB File: 2AM-LUP2032



February 16, 2021

via email at: licensing@nwb-oen.ca

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

Dear Richard Dwyer,

RE: 2AM-LUP2032 Lupin Mine Water Licence – Final Closure and Reclamation Plan

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Water Board (NWB) for water licence 2AM-LUP2032 by Lupin Mines Incorporated (the Proponent). As requested by the NWB, ECCC has reviewed the Proponent's responses to ECCC's comments on the Final Closure and Reclamation Plan.

ECCC's specialist advice is based on our mandate pursuant to the *Canadian Environmental Protection Act* and the pollution prevention provisions of the *Fisheries Act*.

The following comments are provided:

1. Tailings Containment Area

Reference(s):

- February 1, 2021 – 2020 Updated Final Closure and Reclamation Plan: Technical Comment Responses by Lupin Mines Inc.
- November 12, 2020 – Letter from ECCC to NWB RE: 2AM-LUP2032 Lupin Mine Water Licence – Final Closure and Reclamation Plan

Previous ECCC Recommendation (November 12, 2020):

ECCC recommends that the proponent have a mitigation plan to address acidic leachates that may occur should the tailings begin to thaw and produce acidic leachate.



Proponent Response:

The active layer at Lupin is deeper than 1 m, which is why Lupin moved away from a permafrost encapsulation tailings closure technology and towards a store-and-release tailings cover technology, as explained in the approved FCRP (LMI, 2017). The store-and-release cover limits oxygen ingress into the tailings and any associated [acid rock drainage (ARD)] generation.

ECCC Comment/Recommendation:

In their response, the Proponent indicates that the store-and-release cover will limit oxygen ingress into the tailings; however, it does not completely eliminate oxygen ingress into the tailings. Therefore, ECCC's recommendation for a monitoring program just in case the store-and-release cover systems does not completely eliminate the chance of ARD generation is still valid.

If you need more information, please contact Victoria Shore at Victoria.Shore@canada.ca.

Sincerely,

A handwritten signature in black ink, appearing to read "Shore".

Victoria Shore
Senior Environmental Assessment Officer
Environmental Protection Operations Directorate, Prairie Northern Region

Cc: Jody Small, Head, Environmental Assessment North (NT and NU)
Environmental Protection Operations Directorate, Prairie Northern Region