

REVIEW OF NWB File # 2AM-MEL 1631

**INTERIM CLOSURE & RECLAMATION PLAN – UPDATE 2020
RESPONSE TO COMMENTS**

Prepared By:



KIVALLIQ INUIT ASSOCIATION

for the

NUNAVUT Water Board (NWB)

December 1, 2021

Executive Summary

The Kivalliq Inuit Association (KivIA), represents the Inuit beneficiaries of the Kivalliq Region, at the territorial and regional levels, and supports sustainable economic development opportunities for Inuit beneficiaries.

The KivIA has reviewed AEM's response to comments on the "Meliadine Interim Closure & Reclamation Plan – Updated 2020", under the NWB file # 2AM-MEL 1631, and has the following comment.

KivIA – Comment 4

Document:

Final report, sections 1.3.3 (Underground), 5.2.3 (Underground)

Comment:

Though it is suggested there is minimal exchange between deep and active groundwater reservoirs, the possibility of deep groundwater contamination should be addressed.

Question:

What volume of paste backfill is expected to be used? Is there a possibility of significant contamination leaching into the deep groundwater?

Agnico Eagle Answer:

As presented in Table 5.1 of the Mine Waste Management Plan (Agnico Eagle 2021), it is expected to use approximately 4,072,219 tonnes of tailings solids as underground backfill over the life of mine (until 2027). This corresponds to an approximate total paste volume of 2.9 million m³.

During the operations phase, the underground mine acts as a groundwater discharge area in which the net saturated flow of groundwater is upward towards the water table. Due to the underground excavations residing below the natural groundwater table, this upwelling occurs across the entire underground mine with the highest groundwater discharge pressures typically observed at the lowest mined elevation. Thus, during operations contamination, leaching into the deep groundwater is not expected as the direction of groundwater flow is expected to be from the aquifer towards the mine excavation.

KivIA Follow up comment:

After the operations phase, when the underground is sealed with pastefill, there will be no net flow due to operations and the pastefill will be in contact with deep groundwater. The KivIA would like to see the potential for leachate transfer from the pastefill to the groundwater addressed in the next version of the ICRP.

All other comments have been adequately addressed.

The KivIA would like to thank the NWB for the opportunity to be part of this review.

Regards

Luis Manzo
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Kivalliq Inuit Association