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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File: 2AM-WTP1830/G1

August 10, 2023

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RE: Licence No: 2AM-WTP1830 Type “A”; Whale Tail Pit Project, Agnico Eagle Mines Limited; Continued Whale Tail and IVR Pits Pushback and Temporary Storage of Groundwater in IVR Pit

Dear Jamie Quesnel and Manon Turmel:

On June 12, 2023, the Nunavut Water Board (NWB or the Board) received a request by Agnico Eagle Mines Limited (Agnico Eagle or Licensee) for a Modification (Request) to Water Licence No: 2AM-WTP1830 (Licence) issued to Agnico Eagle for the Whale Tail Pit Project (Project). In the Request, the Licensee sought the Board’s approval to continue pushback of the Whale Tail and IVR Pits and temporarily store groundwater in the “east lobe” of the IVR Pit. The Request included the *Whale Tail Mine—Water Management Plan* and the *Whale Tail Mine—Waste Rock Management Plan*, both dated June 2023.

The Board was advised that, on May 26, 2023, the Nunavut Planning Commission (NPC) issued its determination that the previous conformity determinations dated July 12, 2002, July 21, 2003, March 10, 2011, October 15, 2015, July 16, 2015, October 16, 2018, and April 20, 2021 still apply and that the Request is exempt from screening by the Nunavut Impact Review Board (NIRB) because the proposed activities do not change the scope of the original or amended Project activities. The NPC noted that Agnico Eagle “... is encouraged to discuss potential implications for the project’s monitoring program with the NIRB”. On June 8, 2023, the NIRB issued correspondence prescribing the Licensee to submit updated management plans.

On June 13, 2023, the NWB distributed the Request for public review with the deadline for comments set for July 4, 2023. On June 26, 2023, Crown-Indigenous Relations and Northern Affairs (CIRNA) requested an extension to the deadline to July 11, 2023, which the Board

granted. On or before July 11, 2023, the NWB received the results of the review¹ from the Kivalliq Inuit Association (KivIA), CIRNA, and Environment and Climate Change Canada (ECCC).

The KivIA expressed interest in receiving a clarification whether all insoluble phosphorus remains in the sludge produced by the wastewater treatment plant, and, if not, whether the water quality model includes consideration for the “mobility of the precipitated phosphorus from the sediment during the closure phases”.

CIRNA stated that the proposed storage of groundwater in the IVR Pit does not fit in with the groundwater storage methods outlined in the Adaptive Management Plan and Water Management Plan for the Project. The agency recommended that the Licensee provide justification of the activity being “environmentally equal or better alternative to the currently approved water management strategies”, as well as describe potential impacts to the environment and risk mitigation measures.

ECCC provided its comments requesting justification of the Licensee’s position that “total concentrations are equal to dissolved concentrations” in the Receiving Environment Model and submitting modelled values for total and dissolved substances.

On July 19, 2023, Agnico Eagle responded:

- The sludge from the wastewater treatment plant is deposited in the Whale Tail Waste Rock Storage Facility where it is bound to freeze.
- “As mining in this area of the IVR pit is completed, it is more environmentally and economically sound to use this already built and exhausted pit than blasting to build another [groundwater storage pond] (GSP) in the ground. IVR Pit would be used as a temporary storage for only 5 months under this modification. Utilizing IVR Pit would minimize additional land disturbance for this short period of time. Finally, the approved Adaptive Management Plan V1.5 already includes storing water into a mined out/exhausted pit”.
- Environmental impacts were evaluated in the 2018 Final Environmental Impact Statement (FEIS) and the Water Management Plan provided for review with the Request.
- Monitoring at Monitoring Program Station ST-WT-18 described as IVR Pit or IVR Pit sump is to be continued as per the Monitoring Program outlined in the Licence.
- The notion of total concentrations of constituents equal to their dissolved concentrations was deduced empirically via monitoring data obtained in the 2014-2023 period from Whale Tail South Basin and Kangislulik Lake. Modelled values of dissolved and total concentrations were provided for operations and post-closure phases of the Project.

On or before July 28, 2023, the parties provided their feedback on the Licensee’s response. The KivIA and ECCC confirmed they had no other comments. CIRNA stated that its concerns were not satisfied.

On August 2, 2023, Agnico Eagle provided additional information:

- Groundwater storage in the IVR Pit eliminates the requirement to construct GSP-2 and GSP-3 and, consequently, causing land disturbance.

¹ Crown-Indigenous Relations and Northern Affairs (CIRNA), dated July 10, 2023; Kivalliq Inuit Association (KivIA), dated July 11, 2023; Environment and Climate Change Canada (ECCC), dated July 11, 2023.

- “The IVR Pit is in a region of permafrost and during the operations phase there will be no flux of water between the pit and the receiving environment.”
- The forecasted total volume of water to be disposed of underground at closure is “1,089,720 m³, of which 61,920 m³ would come from IVR Pit (5.7%) and 139,900 m³ (13%) would come from GSP-1. From the 2018 FEIS, about 25% of the water to flood the underground void would come from the GSPs (148,464 m³ + 178,081 m³ out of 1,267,081 m³)”.
- The forecast groundwater flow from the mined-out pits post-closure is at the rate of 2 m³ daily, which results in a thousand-year breakthrough time to Lake DS1 where the mine footprint area is predicted to discharge.
- “Water quality predictions were updated for the modification. The updates were based on calibration using monitoring data from 2020 to 2022. In closure and post-closure, water quality in the downstream environment is predicted to be less than the aquatic life guidelines”.
- Agnico Eagle forecasts the need to utilize IVR Pit for groundwater storage starting in approximately August 2025. As such, Agnico Eagle will update the Water Management Plan through the regular Annual Reporting cycle to reflect the option to utilize IVR Pit for temporary groundwater storage.

Copies of all documents received in support of the Request 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-WTP1830%20Agnico/3%20TECH/G%20MODIFICATIONS/>

NWB’s Review and Decision

The NWB would like to highlight that in making the decision on the Request, the Board considered the following:

1. The modelled values of the constituents post-closure in Whale Tail South and Kangislulik Lake provided by Agnico Eagle in response to ECCC’s inquiry are below the limits of the Canadian Council of Ministers of the Environment’s *Canadian Environmental Quality Guidelines* (CCME) and the Site-Specific Water Quality Objectives (SSWQO).
2. The temporary nature of groundwater storage in the IVR Pit, as the Request limits the time period required for the activity at five (5) months starting in August 2025.
3. No flow of water out of the IVR Pit into the receiving environment will occur during operations due to the IVR Pit being located in the permafrost zone.
4. The passage of groundwater from the mined-out pits and its breakthrough into the receiving environment post-closure is very slow.

Therefore, the NWB, having fully reviewed the Licensee’s Request in the context of Interveners’ comments and recommendations, potential impact of the proposed activities on the freshwater environment, and consistency of the proposed activity in relation to the scope of the Licence, as well as the clarifications provided by the Licensee, determined that the modification proposed is consistent with the scope of activities considered under the Licence issued to the Project. Therefore, by way of this correspondence and in accordance with **Motion No: 2023-A1-003** and

IVR and Whale Tail Pits Pushbacks, Temporary Groundwater Storage Modification

Part G, Item 1 of the Licence, the Board authorizes Agnico Eagle to undertake the modification in accordance with Agnico Eagle's Request. The authorization takes into account Agnico Eagle's commitments made during the technical review process, such as providing an updated Water Management Plan with the 2023 Annual Report which will precede the proposed temporary storage of groundwater within the IVR Pit. The Board also approves the *Water Management Plan* and the *Whale Tail Project – Waste Rock Management Plan*, both dated June 2023, in accordance with the above Motion and Part B, Item 14 of the Licence. The Licensee is advised that the management plans can be implemented upon the issuance of this letter by the Board.

In addition, the Board advises the Licensee that in accordance with Part G, Item 2 of the Licence, changes in excess of those authorized under this modification, may constitute a separate potential modification or amendment to the Licence, which may require respective determination(s) from the Nunavut Planning Commission (NPC) and/or the NIRB prior to receiving any consideration(s) and/or determination(s) from the NWB. Further, in keeping with Part G, Item 4 of the Licence's terms and conditions, the submission of post-construction information, including as-built plans and drawings (if any), shall remain applicable to this authorization.

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,



Assol Kubeisinova
Technical Advisor
Nunavut Water Board

Cc: Distribution List—Meadowbank