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- Potential Future Long-term Strategy: ocean disposal.

The short term strategy is currently being implemented on-site as part of the short-term management of groundwater inflow and involves storing all excess groundwater in underground sumps and in surface water ponds at the Mine. As outlined in the WMP, a total of nine water containment ponds are planned onsite at the mine surface (CP1, CP3, CP4, CP5 and CP6, the P-Area [P1, P2, and P3], and the Saline Pond), and associated water retention dykes, water diversion berms, channels, and culverts, to manage surface water and underground water.

The submission was distributed for a thirty (30) day public review with a deadline set at March 16, 2018. On March 16, 2018, the Environment and Climate Change (ECCC) provided its comments to NWB. On June 15, 2018, Agnico Eagle submitted an updated Groundwater Management Plan Version 2 (GWMP or Plan) to reflect ECCC's comments. The NWB made the updated document publicly available for additional review with a deadline set at June 25, 2018 extended to July 10, 2018 as per request from Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC or former INAC). Additional comments were received from ECCC and CIRNAC on June 25, 2018 and July 9, 2018, respectively.

Summary of Comments and Recommendations

ECCC: March 16, 2018 and June 25, 2018

- The current version of the Groundwater Management Plan should be revised to include additional details on groundwater quality monitoring, and a detailed groundwater monitoring plan should be provided in subsequent versions of the Groundwater Management Plan.
- Section 4.2 (Water Quantity) indicates that groundwater inflow rates will be compared to model predictions annually, and states that if "significant variations" from model predictions are observed, the assumptions behind the analysis will be reviewed and the analysis updated "if required". It was recommended that Section 4.2 be updated to clarify under what circumstances groundwater model analysis (i.e., predictions) would be updated and what circumstances would trigger a model recalibration.
- Section 4.3 (Water Quality) should describe whether and how sampling from diamond drill-holes will provide data that fully characterizes the quality of groundwater flowing into the underground mine.
- ECCC noted that, in addition to the parameters listed within Section 4.3, an additional parameter, ammonia, should also be monitored as ammonium nitrate explosives used in mining operations could potentially elevate ammonia levels in groundwater, and groundwater management involves discharge of treated groundwater to surface waters.
- Section 3.4.3 (Potential Future Long-Term Management Strategy - Treated Groundwater Discharge to Melvin Bay at Itivia Harbour) notes that discharge to the ocean would have to meet criteria under the Metal Mining Effluent Regulations (MMER) or the amended version. ECCC confirmed that the Metal and Diamond Mining Effluent Regulations (MDMER) came into force on June 1, 2018 and will be applicable to discharges to Melvin Bay.

- Section 4.3 (Water Quality) states that “Water samples will be analyzed for the following parameters: conductivity, TDS, pH, temperature, major anions, radium 226, dissolved and total metals and toxicity testing. Water quality results are compared to MMER and SSWQO guidelines and will be compliant prior to discharging to Meliadine Lake.” ECCC recommended to include the qualifier “compliant after treatment” in Section 4.3 as there won’t be direct discharge to Meliadine Lake without treatment; and to clarify whether major anions intended to include ammonia.

CIRNAC: July 9, 2018 and July 30, 2018

- In section 3.2 of the Groundwater Management Plan, the P1- P3 areas are listed as structures used to store groundwater, however, there is no mention of the P-Area in the 2AM-MEL1631 Water Licence or application. CIRNAC understands that these structures and activity is currently captured under the 2BB-MEL1424 licence and not the 2AM-MEL1631 licence and recommended that NWB should consider requesting an amendment for this activity to allow for proper review.
- Section 3.4 of the current GWMP) being reviewed for approval is requested for the short and long term strategy identified in the GWMP. Section 3.4.1 states “These short-term storage and treatment options are being implemented at the Mine pending regulatory approvals for the long-term groundwater management option”. CIRNAC is of the opinion that this plan has not yet been approved and therefore what is stated in the plan should not be implemented until such time that approval for this plan is granted. Agnico Eagle should confirm to the NWB exactly what is being implemented at this stage.
- As two different Water Management Plans (2015a and 2017) are referenced in the GWMP, it should be clarified which plan is approved by the Board.
- During the winter of 2017/2018 Agnico Eagle brought in a Reserve Osmosis water treatment plant unit (RO unit) to treat the contaminated water with elevated TDS level in CP1 prior to release. Agnico Eagle proposed to deposit brine water, by-product of the RO unit into the P-area. If two licences (2AM-MEL1631 and 2BB-MEL1424) are being used interchangeably here, CIRNAC would like clarification on which licence this undertaking falls under.

On July 20, 2018, Agnico Eagle submitted another updated version of *Groundwater Management Plan, version 2, July 2018*, addressing both ECCC and CIRNAC June 25 and July 9, 2018 comments. On July 23, 2018, ECCC advised the NWB that they are satisfied with the last updated version of GWMP. On July 30, 2018, CIRNAC advised the Board that CIRNAC is satisfied with the information provided, *however CIRNAC is finding it difficult to distinguish what activities are covered under what licences. CIRNAC, in future would like to see very clear and distinguishable licences*

The Board finds the *Groundwater Management Plan, Version 2, July 2018*, functional and generally satisfying Licence requirements, and by copy of this letter has approved the above stated document through the Board Motion No. 2018-A1-007, dated July 30, 2018 as required by Part E, Item 14 of Water Licence 2AM-MEL1631.

However, the NWB notes that in its responses to CIRNAC comments regarding P-Area Agnico Eagle stated:

As noted, these activities are licenced under the 2BB-MEL licence and have been reviewed in accordance with applicable Nunavut Water Board processes. Agnico Eagle does not agree it is necessary to apply for an amendment to 2AM MEL1631 for an activity that is already licenced. It is Agnico Eagle's intent to pursue an amendment to the 2AM-MEL1631 water license in 2022 for other purposes. If it has been determined at that time that there is a need to keep the P-area long-term (beyond 2022), Agnico Eagle will give consideration to this comment as part of this license amendment.

The NWB would like to highlight that the Board generally concurs with the CIRNAC comments that P-Area structures are *currently captured under the 2BB-MEL1424 licence and not the 2AM-MEL2631* (noted by CIRNAC Inspector as well). The Board is of opinion that should Agnico Eagle have a continuous need to use these structures to manage the groundwater generated by activities licensed under the Type "A" Water Licence 2AM-MEL1631, Agnico Eagle will be required to incorporate these structures under the scope of Type "A" licence. The Board also recognizes that there are significant process and procedural implications that would arise with the amendment to the Type "A" licence, if these structures are to be incorporated immediately within the Type "A" licence, and acknowledges Agnico Eagle's *intent to pursue an amendment to the 2AM-MEL1631 water license in 2022 for other purposes*. Therefore, the Board advises Agnico Eagle to include P-Area structures and associated information within the scope of the future amendment application, if they continue to use the P-Area structures for 2AM-MEL1631. The Board has also agreed with CIRNAC comment that the activities covered under the existing Type "A" and Type "B" licences should be clearly distinguished.

The Board also noted that in its Inspection report of November 18, 2017, the CIRNAC Inspector did raise concerns associated with the operations of the *P1-P3 structures as designed to hold saline water these structures are not performing to the original proposed design (frozen core)*. The Inspector also noted ice buildup on the North side of the P1 structure. *The ice buildup extends from the northern boundary of P1 to the south side of the road that runs along the CP-1* The NWB strongly recommends that the Licensee make all efforts to ensure that these structures are performed to the original design and to address all operational issues.

Should you have any questions, please feel free to contact the undersigned at (867) 360-6338 (ext. 35) or karen.kharatyan@nwb-oen.ca.

Regards,

Karén Kharatyan
Director of Technical Services

cc: Distribution List - Meliadine