



May 31st, 2019

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

Re: Agnico Eagle Mines – Meadowbank Division Responses to Landfill Design Report Comments

Dear Mr. Dwyer,

As requested, the following responses are intended to address the comments made in the below letter:

- CIRNAC – May 17, 2019, Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) representations to Agnico Eagle Mines Limited's (AEM's) Landfill Construction Notice – Whale Tail Pit Project under AEM's Type "A" Water Licence No. 2AM-WTP1826.

Should you have any questions or require further information, please do not hesitate to contact me.

Best regards,

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Senior Compliance Technician



1 Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)

1.1 Stability Analysis

Comment 1: CIRNAC is not able to locate information indicating the type of existing soil layers under the berms planned for construction along the perimeter of the landfill. Depending on the type of existing soil layers, a site-specific stability analysis may be required. This type of analysis may have already been completed for the Whale Tail Waste Rock Storage Facility (WRSF).

Recommendation 1: CIRNAC requests AEM clarify or submit accordingly the results of the indicated stability analysis of the berms.

Agnico Eagle's Response:

The landfill sites will be contained within the overall footprint and design of the WRSF, sharing the same protective berms. As such, the stability analysis done for the Whale Tail Waste Rock Storage Facility (WT WRSF) is applicable. This stability analysis showed satisfactory safety factor for the approved WT WRSF configuration.

1.2 Leachate Management

Comment 2: Section 3.3 – Leachate Management states: “the quantity of leachate is expected to be minimal, and of low ionic strength. The proposed landfill will nonetheless receive precipitation during the summer period, which could infiltrate the landfill before it can evaporate. In the event that leachate reports from the landfill, it will be collected in the WRSF Pond and pumped to the Whale Tail Attenuation Pond for further management (see Whale Tail Pit Water management plan in Appendix C). Based on the design strategy for the proposed landfill, and the management and operating procedures listed above, a liner is not considered necessary for the landfill.” It is not clear to CIRNAC how AEM is anticipating to monitor for and mitigate any unexpected leachate percolating through the existing natural soils underneath the landfill.

Recommendation 2: CIRNAC requests AEM clarify how AEM is anticipating to monitor for and mitigate any unexpected leachate percolating through the existing natural soils underneath the landfill.

Agnico Eagle's Response:

Based on experience regarding the landfill at Meadowbank and as detailed in the Whale Tail Landfill and Waste Management Plan (Version 1, January 2017), the leachate from the landfill is expected to be very weak (dilute) or simply absent due to the controls on materials placed in the landfills. Therefore, specific landfill leachate management is not required. In the event there is leachate from the landfill during periods of heavy rainfall or spring freshet, the runoff will be directed and collected in WRSF Pond and directed to the Whale Tail Attenuation Pond where it will be integrated as part of the water management plan and then, if necessary, treated before release to the receiving environment. Water



accumulated in the WRSF pond will be sampled as the Water License 2AM-WTP1826, Schedule 1 Table 2 – ST-WT-3.

The environmental department will conduct periodic inspections to ensure compliance with the regulations, permits and operational plans.

In the event that greater volumes of leachate, or leachate with high ionic strength is found coming from the proposed landfill, an investigation will immediately be undertaken to determine the cause. This could lead to changes in the configuration and/or management of the landfill to further limit water coming in contact with landfill materials and/or modify the water management strategy in this area. Because the proposed landfill will be located in an area with underlying permafrost deep groundwater contamination from potential landfill leachate is not anticipated.

1.3 Material Placement Protocol

Comment 3: Section 3.2 – Material Placement Protocol states: “once compacted, waste rock will be placed on the debris to infill voids. Once a continuous layer of waste rock has been covered the compacted debris a final cover of non-potentially acid generating (NPAG) waste rock will be placed over the entire landfill area.” It is not specified whether the waste rock used on the debris to infill voids is also NPAG.

Recommendation 3: CIRNAC requests clarification on if NPAG waste rock will be used within the landfill to infill the debris voids.

Agnico Eagle’s Response:

The landfill sites will be contained within the overall footprint and design of the WRSF and therefore will share the same 4.7m thick NPAG thermal cover capping as the WRSF itself. As such, the material within the landfill will not be exposed to the elements, similarly to the PAG material present on the WRSF around it.

1.4 Cover Design

Comment 4: On Drawing – Whale Tail Landfill and Cross Sections [190419 2AM-WTP1826 Whale Tail Landfill Design Report-ILAE (page 8 of 9 pdf)], CIRNAC noticed that one (1) x 600 mm layer of NPAG waste rock will be used to cover the landfill. In the Landfill and Waste Management Plan [170125 2AM-WTP---- Landfill Design & MGMT Plan-IMLE (page 27 of 170 pdf)] two (2) other layers (transition rockfill and liner bedding till layers) have been indicated in addition to the (1) x 600 mm layer of NPAG waste rock cover for a total of three layers.



Recommendation 4: CIRNAC requests AEM to clarify the number and type of layers in the landfill cover design, and if applicable, the reason for the change in landfill cover design from three layers to one layer.

Agnico Eagle's Response:

Subsequent detailed engineering analysis determined that the two other transition layers would not be required to prevent seepage from the landfill and were therefore removed from the design. Unexpected seepage, if any, will be captured within the WRSF, which itself will be frozen and protected by the NPAG thermal cover. The Landfill and Waste Management Plan shall be updated at the next annual review to reflect this design change.

1.5 Construction Method

Comment 5: Section 3.1 – Construction Method states: “a service road, accessible only to mine staff and Agnico Eagle contractors, will connect the landfill to other mine infrastructure.” No additional details on the service road are provided in the landfill design report nor accompanying appendices.

Recommendation 5: CIRNAC requests the specifications of the indicated service road for staff and contractors vehicles to access the landfill are provided with the landfill design report.

Agnico Eagle's Response:

The described access road will be constructed with road aggregate material within the footprint of the WRSF on top of a rockfill foundation. The road will be a 6.5m wide single-lane access road, constructed with a 1.35m rockfill lift and a 0.15m granular material cover.