



September 18th, 2020
Richard Dwyer
Manager of Licensing
Nunavut Water Board
P.O Box 119
Gjoa Haven, NU X0B 1J0

Re: Agnico Eagle Mines – Responses to Management Plan Update to Water License 2AM-WTP1830 Part B Item 5

Dear Mr. Dwyer,

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

- August 14, 2020; Environment and Climate Change Canada, 2AM-WTP1830 Agnico Eagle Mines Ltd. – Whale Tail Pit Updated Management Plans.
- August 31, 2020; Kivalliq Inuit Association, Whale Tail Project Updated Management Plans, Agnico Eagle Mines Ltd. (AEM).
- August 31, 2020; Crown-Indigenous Relations and Northern Affairs Canada, Crown-Indigenous Relations and Northern Affairs Canada Review of Seven Management Plans for the Whale Tail Project, Water Licence No. 2AM-WTP1826, submitted by Agnico Eagle Mines Ltd.

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

Best regards,

Alexandre Lavallée
alexandre.lavallee@agnicoeagle.com
819-860-0804
Environment Superintendent Interim



Table of Content

1	Whale Tail Pit Water Management Plan	4
1.1	Environment and Climate Change Canada	4
1.1.1	Saline Water Management.....	4
1.1.2	Discharge Locations	4
1.1.3	Water Management Activities and Sequence	5
1.2	Kivalliq Inuit Association	5
1.2.1	Update Frequency	5
1.3	Crown-Indigenous Relations and Northern Affairs Canada	6
1.3.1	Treated Effluent Discharge Period for Lake A16	6
1.3.2	Water Infrastructure Performance Issues	6
1.3.3	Dike Construction - IVR Dikes	7
1.3.4	Dike Construction - IVR Dikes	7
1.3.5	Whale Tail Dike Seepage.....	8
2	Whale Tail Pit Interim Closure and Reclamation Plan	8
2.1	Environment and Climate Change Canada	8
2.1.1	Monitoring and Maintenance Plan.....	8
2.1.2	Closure Goals	9
2.1.3	Waste Rock Storage	9
2.1.4	Water Management Facilities – Contingencies	9
2.1.5	Post-Closure Monitoring.....	10
2.2	Kivalliq Inuit Association	11
2.2.1	Lessons Learned.....	11
2.3	Crown-Indigenous Relations and Northern Affairs Canada	11
2.3.1	Restoration of Mined Areas through Re-grading and Revegetation	11
2.3.2	Slope Stability Analysis	12
2.3.3	Backfill in Areas of Subsidence	13
3	Whale Tail Pit Waste Rock Management Plan	13
3.1	Environment and Climate Change Canada	13
3.1.1	Waste Rock Properties	13



3.1.2	Ore Properties	14
3.1.3	Waste Rock Storage Facilities Design	15
3.2	Crown-Indigenous Relations and Northern Affairs Canada	15
3.2.1	Whale Tail Waste Rock Storage Facility Mitigation Measures	15
3.2.2	Adaptive Management	16
4	Emergency Response Plan	16
4.1	Crown-Indigenous Relations and Northern Affairs Canada	16
4.1.1	Frequency of Emergency Response Preparedness (ERP) Testing	16
4.1.2	Emergency Response Management Personnel	17
5	Quality Assurance / Quality Control (QA/QC) Plan	17
5.1	Crown-Indigenous Relations and Northern Affairs Canada	17
5.1.1	Fill Level for Sample Bottles	17
5.1.2	Relative Percent Difference (RPD)	17



1 Whale Tail Pit Water Management Plan

1.1 Environment and Climate Change Canada

1.1.1 Saline Water Management

Reference: Section 3.1.4.16; Appendix B – Water Management Schematic Flowsheets

Comment 1: The overall site management describes the storage of high salinity groundwater in GSP1 and low salinity groundwater in GSP2. If treatment of low salinity groundwater is required, the brine produced from treating GSP2 saline water would be directed to GSP1, along with the high salinity water from the operations. As per the flowsheets provided in Appendix B, the high salinity water from GSP1 will also be treated and discharged to Whale Tail Lake. However, with the addition of the brine to GSP1, it would be expected that the salinity of GSP1 would increase substantially over time, becoming more concentrated as additional brine from GSP2 treatment is added to the pond. Given that the water in GSP1 is indicated to be discharged to Whale Tail Lake, a discussion on treatment efficiency and discharge quality should be provided.

Recommendation 1: ECCC recommends that the Proponent provide additional clarity and discussion on management and treatment of saline groundwater, including expected treatment efficiencies.

Agnico Eagle's Response:

The water management strategy for saline water is currently under revision by Agnico. Agnico is looking at an Underground Project limited into the permafrost only. This change results in no more treatment and discharge of saline water to Whale Tail Lake. The water management strategy for underground water would only be based on storing water in GSP-1 and GSP-2. High and low salinity water would not be segregated anymore. At closure, the water from GSP1 and GSP2 will be sent underground.

The water management strategy for saline water will be updated in the next version of the Whale Tail Pit Water Management Plan. If the underground project change and revert to the scope of the FEIS application additional details on management and treatment of saline groundwater will be provided in the water management plan.

1.1.2 Discharge Locations

Reference: Section 3.1.4.4

Comment 2: The Water Management Plan states that, “any water requiring treatment will be pumped to the water treatment plant(s) prior to discharge through the diffuser in Mammoth Lake or through a diffuser in Whale Tail Lake (South Basin) or other alternatives.” The Proponent does not provide an additional description of what “other alternatives” for discharge are being considered.

Recommendation 2: ECCC recommends that the Proponent identify what is meant by “other alternatives” and indicate whether any other locations are being considered for discharge.



Agnico Eagle's Response:

In the Whale Tail Pit Water Management Plan the "other alternatives" mentioned for discharge are outlined in the Whale Tail Pit Expansion Project Adaptive Management Plan (Table 3: Receiver Water Quality Adaptive Management Strategy). The plan is currently under the NWB approval process. The other alternatives for discharge are Lakes D1 and D5 in the case that Level 3 is reached (high risk situation in the receiver water quality). Discharging in Lakes D1 or D5 would require a complete assessment of potential discharge, with approval from the NWB as per NIRB Project Certificate Conditions.

1.1.3 Water Management Activities and Sequence

Reference: Table 3.3 – Water Management Activities During Construction and Operations; Appendix B – Water Management Schematic Flowsheets

Comment 3: There are inconsistencies regarding the IVR attenuation pond between the summary of water management activities provided in Table 3.3 and the water management flowsheets provided in Appendix B. Specifically, during Year 2-3 (2020-2021), Table 3.3 indicates that the majority of contact water sources are moving towards management through the IVR Attenuation Pond. However, in Appendix B, the IVR Attenuation Pond does not appear on the flowsheets until May 2022. Based in the discrepancies in the documents, it is unclear when IVR Attenuation Pond is to be operational and what implications these discrepancies may have on overall site water management.

Recommendation 3: ECCC recommends that the Proponent clarify the timing of commissioning of the IVR Attenuation Pond and any implications that changes to the timing of commissioning may have to overall site water management.

Agnico Eagle's Response:

The water management flowsheets provided in Appendix B of the Whale Tail Pit Water Management Plan are from the May 2019 Golder "Whale Tail Pit – Expansion Project 2019 Mean Annual Water Balance Update". Changes in the timing of the Expansion Project have occurred since the report was issued and it is planned to update the water management flowsheets in the next version of the Whale Tail Pit Water Management Plan. Table 3.3 should be considered accurate in term of discrepancy with Appendix B. The main storage area for contact water will be IVR Attenuation Pond once it's commissioned (currently planned for freshet 2021).

1.2 Kivalliq Inuit Association

1.2.1 Update Frequency

Reference: Executive Summary, page ii

Comment 1: In the summary it documents that 'the conservative predictions of future water quality indicate that most parameter concentrations in the downstream environment are below CEQG-AL except for arsenic.'

Recommendation 1: The KivA would like to know how often the water balance and water quality modeling will be updated, in particular, as it relates to the arsenic concentration.



Agnico Eagle's Response:

The water balance and water quality modeling will be updated once per year for the annual reporting exercise.

1.3 Crown-Indigenous Relations and Northern Affairs Canada

1.3.1 Treated Effluent Discharge Period for Lake A16

Comment 1: In the Whale Tail Pit Water Management Plan, Section 3.1.3: Waterbody Inventory - Watershed A - Various water management activities, Table 3.1, the treated effluent discharge period is not indicated for Lake A16.

Recommendation 1: CIRNAC recommends that AEM clarify the treated effluent discharge period for Lake A16, and include this information in any future updates of the Whale Tail Pit Water Management Plan.

Agnico Eagle's Response:

The treated effluent discharge period for Lake A16 (Mammoth Lake) began in the second dewatering phase of the project in June 2019 and will continue throughout mine operations and into closure. This information will be included in future updates of the Whale Tail Pit Water Management Plan.

1.3.2 Water Infrastructure Performance Issues

Comment 2: In the Water Management Plan, Section 3.1.4.2: Dike Construction - Northeast Dike, AEM states that during summer 2019, the water natural flow was impeded by the natural topography. This resulted in issues with the planned overflow conveyance system which needed to be changed with the addition of a pumping system.

In Section 3.1.4.18: Non-Contact Water Management, AEM states that in order to adequately manage non-contact water, some passive flows have been substituted with a pumping alternative that complies with the original intent of the approved water balance and Water Licence 2AM-WTP1830 (same origin and same destination). AEM adds that those systems were proposed as adaptive management methods in response to the encountered site conditions during open water season and the high volume of precipitation received, resulting in additional volume of water to manage.

Although AEM states that “the water quality is not considered at risk as this is non-contact water from the NE Pond” there are impacts on water management structures as described above, and there may be subsequent potential for transformation of non-contact water (Lake A49 overflow) into contact water (pit water), and problems with Total Suspended Solids (TSS) related requirements under Water Licence 2AM-WTP1830, Part F (Item 7).

Recommendation 2: CIRNAC recommends that AEM continue to identify and assess the water infrastructure performance issues and monitor the adequacy of the conveyance system put in place to allow for a more efficient water management, and subsequently avoid emergency situations. In addition, AEM would benefit from capturing the lessons learned related to the design, construction and operation issues and include them in the Water Adaptive Management Plan and other related management plans.



Agnico Eagle's Response:

Agnico will continue to identify and assess the water infrastructure performance issues to ensure efficient water management. A lesson learned exercise on the 2019 freshet was performed in 2020 and was used to improve water management practices and plans for 2020 and beyond. Agnico is pleased to report the 2020 open water season went much smoother than 2019.

1.3.3 Dike Construction - IVR Dikes

Comment 3: A short description of the IVR Dikes, including details regarding their design, typical section and role, is presented in the 2019 Water Management Plan, Section 3.1.4.2: 2 Dike Construction - IVR Dikes. This section has been removed from the 2020 version (Version 5) of the Water Management Plan. It is not clear why these details have been removed.

Recommendation 3: CIRNAC recommends that AEM clarify why the description of IVR Dikes has been removed, or where this information is now located

Agnico Eagle's Response:

The details on IVR Dike have been removed from the water management plan as this infrastructure is currently under detailed engineering design and the information presented was outdated. Information will be added in the plan once the structure is commissioned.

1.3.4 Dike Construction - IVR Dikes

Comment 4: Section 3.1.4.5 of the 2019 Water Management Plan states:

O'Kane Consultants developed a landform water balance model in April 2019. The objective of the landform water balance was to estimate the runoff, interflow, and basal seepage rates for different slopes and aspects of the Whale Tail and IVR WRSFs (OKC, 2019).

A summary and a discussion of results were included under this section in the 2019 version of Water Management Plan. It is not clear why the results have been removed from the 2020 version (Version 5) of the Water Management Plan, as this section pertains to estimated landforms runoff inflows into various attenuation ponds and potential basal seepage from landforms, and the reference to the O'Kane Consultants document is given under Section 3.1.4.7 – Water Management in Whale Tail Waste Rock Storage Facility.

Recommendation 4: CIRNAC recommends that AEM clarify why the results of the landform water balance model, developed by O'Kane Consultants, have been removed, or where this information is now located.

Agnico Eagle's Response:

Information on the landform water balance model can be found in the report referenced in the management plan (OKC, 2019). The results of the model are integrated in the water balance presented in the report.



1.3.5 Whale Tail Dike Seepage

Comment 5: In the Whale Tail Water Management Plan, Section 3.1.4.2: Dike Construction, Whale Tail Dike Seepage, AEM states that in July 2019 a seepage flow was identified and reported, and the seepage flow rate was higher than the rate anticipated. AEM reports that a detailed investigation took place to better understand the situation and “A pumping system was installed to manage the seepage water, as presented in Section 3.1.4.15 of this report” referring to the same plan.

Section 3.1.4.15: Water Management for Landfill does not present details of the pumping system for managing seepage water. It is not clear where these details are provided.

Recommendation 5: CIRNAC recommends that AEM provide the details pertaining to the pumping system that was installed to manage the seepage water referenced in Section 3.1.4.2, or clarify where these details are now located.

Agnico Eagle’s Response:

The reference in the water management plan to the seepage pumping system should have read Section 3.1.4.18; this will be corrected in the next version. The as-built report of this system is under redaction. Reference to the report and a summary description of the system will be added to Section 3.1.4.18 in the next revision of the management plan.

2 Whale Tail Pit Interim Closure and Reclamation Plan

2.1 Environment and Climate Change Canada

2.1.1 Monitoring and Maintenance Plan

Reference: Section 1.2 – Monitoring and Maintenance Plans

Comment 1: The Proponent states that the “The post-closure phase could be reduced if water quality becomes acceptable for direct discharge to the environment at an earlier date”. ECCC notes that as long as Whale Tail mine is subject to the Metal and Diamond Mine Effluent Regulations (MDMER), all effluent is to be discharged through a final discharge point (FDP) and monitored as required by s.12 of the MDMER until such time that the mine acquires the recognized closed mine status (RCM) per Part 4, s.32 of MDMER.

Recommendation 1: ECCC recommends that the Proponent be aware of the requirements set out in the MDMER.

Agnico Eagle’s Response:

Agnico is aware of that requirement and still believes that it is compatible with the opportunity to reduce the duration of the post-closure phase if water quality objectives are met.



2.1.2 Closure Goals

Reference: Section 2.4 – Goal of the Closure and Reclamation Plan

Comment 2: As one of the goals of closure and reclamation, the Proponent indicated that it will • “Give preference to closure solutions that do not require subsequent maintenance (i.e., “walk away” solutions) or else solutions that reduce maintenance requirements (example “passive water treatment”). It is the view of ECCC that a substantial effort be made to select a closure solution that best protects the environment and not just a solution that makes it possible to “walk away” or “reduce maintenance”.

Recommendation 2: ECCC recommends that the closure and reclamation plan ensure that environmental protection takes precedence over reduced maintenance or walk away options.

Agnico Eagle’s Response:

Agnico believes that both objectives (walk away and protection of the environment) are compatible. The closure and reclamation plan includes closure solutions that meet both objectives.

2.1.3 Waste Rock Storage

Reference: Section 4.5.3 – Waste Rock and Overburden Storage Facilities

Comment 3: The Proponent stated that “In the unlikely scenario of insufficient NPAG/NML waste rock material available to complete the recommended cover thickness, the design would need to be reassessed with consideration for insertion of a layer of fine material in the WRSF to reduce the active layer thickness and to limit air convection processes.”

Recommendation 3: Should a reassessment be required, ECCC would like the opportunity to evaluate the reassessment.

Agnico Eagle’s Response:

Information on material balance and capping progress for the WRSFs will be communicated in the annual report. Any change in the capping strategy would be communicated in that update.

2.1.4 Water Management Facilities – Contingencies

Reference: Section 5.2.9.9 – Contingencies

Comment 4: Section 5.2.9.9 (Contingencies) of the ICRP states that if the results of water quality monitoring indicate that water in the flooded area is not suitable for direct discharge, then in-situ treatment would be considered. The ICRP does not provide sufficient information with respect to contingency measures to manage water quality in the flooded pit lake, including details on in-situ treatment.

Recommendation 4: ECCC recommends that the ICRP include a discussion of whether and how in-situ treatment of the flooded pit lake would be feasible, and how long in-situ treatment could be provided.



ECCC also recommends that the ICRP identify and describe any alternative water management contingency options in the event that water quality monitoring indicates water in the flooded area is not suitable for direct discharge and/or reconnection to surface waters. The discussion should include short, medium and long-term contingency options.

Agnico Eagle's Response:

Agnico believes from the water quality assessment that includes modelling the water quality of the refilling pit during closure and the flooded pit condition that water treatment will not be required during the backflooding phase and that the water quality in the backflooded pit will be suitable for reconnection to the downstream receiving environment. However, Agnico Eagle agrees to provide additional information in the next version of the ICRP with respect to contingencies for water quality management in the pit lake as it is being flooded including considerations on potential in-situ treatment options, and water management contingencies in the event that water quality monitoring indicates water in the flooded area is not suitable for reconnection to the downstream receiving environment.

2.1.5 Post-Closure Monitoring

Reference: Table 8.0-1 – Proposed Closure and Post-Closure Main Activities Schedule

Comment 5: Table 8.0-1 identifies the duration of pit flooding, which lasts through the closure stage until year 24 (2042). During this time, there will be monitoring of water quality and updating of model predictions. The post-closure monitoring stage is anticipated to be 3 years. ECCC acknowledges that there will be a long period of pit water quality monitoring during flooding, and that the closure stage conditions should be fairly well understood at that time. However, three years of post-closure monitoring may not be sufficient if pit water conditions are not in a steady state.

Recommendation 5: ECCC recommends that the post-closure monitoring period be open-ended, defined by conditions rather than a pre-set time period.

Agnico Eagle's Response:

The post-closure phase is the period of time that would commence upon completion of the agreed closure activities set out in the FCRP. The projected duration of the closure period is 17 years. As per the ICRP a three year post-closure monitoring phase is anticipated to confirm site stability.

For clarity, the post-closure period (i.e., at the time of reconnection) will not begin until closure criteria are met. While based on site data, and extensive water quality modelling efforts, a three year monitoring period will be sufficient to demonstrate long-term site stability. This was confirmed through the application of a variety of models which includes:

- operations, closure, and post-closure site and downstream receiving environment water quality models with varying optimization conditions*
- pit lake and receiver hydrodynamic models*
- climate change scenarios RCP6.0 and RCP8.5*
- 1-10 and 1-100 year flood event scenarios*



- *cryo-concentration effects*
- *contamination of the WRSF thermal cover with high arsenic leachable material*

During the operations and closure phase, site monitoring data will be used to recalibrate and update the site water quality models on an annual basis, which will validate projected post-closure conditions. At that point, taking into account monitoring during the operations and closure phases, Agnico Eagle will have at least 24 years of data and updated water quality predictions before entering the post-closure phase.

The Adaptive Management Plan, under NWB approval process, has proposed mitigation strategies in the event water quality forecast results do not meet predictions during operations, which will further ensure closure and post-closure water quality predictions are met. This Adaptive Management Plan has been developed with intervenors through a series of workshops and will be an effective tool to manage operations to help alleviate risk to post-closure water quality.

Based on the above, Agnico Eagle is confident that a three year post-closure monitoring program is sufficient.

2.2 Kivalliq Inuit Association

2.2.1 Lessons Learned

Reference: Appendix C + Lessons Learned from Other Projects

Comment 1: The KivIA is very encouraged by AEM's documentation of the lessons learned from other northern mines and their own 10 years (2010-2020) of mining experience in the Kivalliq Region. The KivIA looks forward to AEM expanding the examples in this Appendix in the next management plan update in areas such as permafrost, hydrogeology, hydrology, building caribou friendly roads and the use of community consultation and IQ in project planning, to name but a few examples.

Agnico Eagle's Response:

Agnico Eagle acknowledges KIA's recommendation and will continue to look at the possibility to expand the examples in this Appendix, in the next management plan update, in the areas listed above based on available information at that time.

2.3 Crown-Indigenous Relations and Northern Affairs Canada

2.3.1 Restoration of Mined Areas through Re-grading and Revegetation

Comment 1: In the Whale Tail Pit Interim Closure and Reclamation Plan, Section 5.2.3.5: Engineering Work Associated with Selected Closure Activity, AEM mentioned that "All temporary stockpiles areas will be re-graded to suit the surrounding topography to the extent possible. It is anticipated that a succession of native community will naturally re-vegetate the areas over time." Under the Section 5.2.5.7: Uncertainties, AEM mentioned "Active vegetation has not been planned at this time as part of the reclamation plan given the cold climate setting of the Project. Additional research on active revegetation may be considered in future iteration of the closure activities."



It is not clear how AEM plans to re-grade the stockpile areas to promote site drainage and encourage revegetation. Further details would aid in CIRNAC's understanding of how this will be achieved.

As AEM already mentioned, "Additional research on active revegetation may be considered in future iteration of closure activities", CIRNAC encourages AEM to make a plan to explore feasibility studies, and test the proposed methods under the progressive reclamation plan in sites where operations have ceased and at other sites at final closure.

Recommendation 1: CIRNAC recommends that AEM clarify the proposed method for re-grading stockpile areas to encourage site drainage and revegetation

Agnico Eagle's Response:

The regrading of the temporary stockpile areas will be designed to suit the surrounding topography to the extent possible and also to ensure positive drainage (i.e. to avoid pond formation). The regrading process detailed methodology is under discussion and the methodology will be provided prior to beginning of the closure activity.

2.3.2 Slope Stability Analysis

Comment 2: In the Interim Closure and Reclamation Plan (ICRP) V3 (page 43, paragraph 4), under the section 4.5.3: Waste Rock and Overburden Storage Facilities, AEM mentioned:

...Similar design parameters will be used for the Expansion Project WRSFs including the proposed Whale Tail WRSF expansion. Agnico Eagle may increase overall height of the WRSFs in consideration of engineering optimization for increasing capacity. **Slope stability analyses for the Expansion Project will be performed and provided 60 days prior to operations consistent with the Approved Project.**

In the latest ICRP (Version 4), AEM omitted the bold section. CIRNAC is of the view that Slope Stability Analysis of the WRSF is important, and it is not clear why this has been removed.

Recommendation 2: CIRNAC recommends that AEM include the following statement in Version 4 of the ICRP, or provide rationale for its removal:

Slope stability analyses for the Expansion Project will be performed and provided 60 days prior to operations consistent with the Approved Project.

Agnico Eagle's Response:

This statement was removed because the Whale Tail WRSF expansion was approved during the permitting process and no 60 day notice will be required for this structure (Part D, condition 4). The slope stability topic is discussed in the document that was submitted and approved during the License Application.



2.3.3 Backfill in Areas of Subsidence

Comment 3: From CIRNAC review of the Whale Tail Pit Interim Closure and Reclamation Plan, specifically Section 5.2.1.5: Engineering Work Associated with Selected Closure Activity and Section 5.2.1.8: Closure and Post-Closure Monitoring, Maintenance, and Reporting, CIRNAC notes that AEM plans to “Periodically backfill any areas of subsidence, should they occur.”

There is no indication of how AEM will determine the root cause of the collapsing or shifting ground. It is not clear how AEM can successfully backfill areas of subsidence with adequate materials without having previously conducted a thorough assessment to understand the root causes of the given subsidence event. Geotechnical investigations may be required to sufficiently understand the reason for the ground shift.

Recommendation 3: CIRNAC recommends that AEM further develop the ICRP, Version 4, Section 5.2.1.9: Contingencies to clarify how AEM will prepare for any unforeseen required geotechnical investigations, in case of subsidence.

Agnico Eagle’s Response:

Filling local subsidence with material is a valid mitigation strategy and might not necessarily trigger a geotechnical investigation if the cause of the subsidence is understood or if the subsidence has no negative impact on the closure strategy. Agnico will be ready to do a geotechnical investigation for area where subsidence mechanism are not well understood or where the subsidence could pose a risk to the closure strategy.

3 Whale Tail Pit Waste Rock Management Plan

3.1 Environment and Climate Change Canada

3.1.1 Waste Rock Properties

Reference: Section 5.1 – Waste Rock Properties

Comment 1: The Proponent states that “All open pits waste material will be sampled and tested during operations to confirm their ARD and ML potential in support of waste segregation. Based on results to date, a sulphur content of 0.1 wt. % appears to be a suitable threshold to identify PAG material”. ECCC notes that even at 0.1 wt. % total sulphur, with no neutralization material, the waste may still have the potential to generate acid.

Recommendation 1: ECCC recommends that the Proponent ensure that there is sufficient neutralization material is available and that segregation does not solely rely on the percentage of sulphur content.

Agnico Eagle’s Response:

As detailed in the Operational ARD-ML Sampling and Testing Plan (Version 5, April 2019), the ARD and ML potential of each waste rock lithology was evaluated through a static and kinetic testing program (Golder 2016). Details on the test methods used and results obtained are provided in Golder (2016; summarized in Appendix A). The Whale Tail Pit geochemical characterization study (Golder 2016) examined the use of carbonate neutralization potential (NP) as a surrogate for bulk NP using data obtained from exploration drilling (Golder



2016). The carbonate NP and bulk NP correlate well ($R^2 = 0.97$), implying that net potential ratio (NPR) calculated using carbonate NP is a safe assessment of available buffering capacity. Further, the maximum potential acidity (MPA) is calculated based on the total sulphur content of the samples (rather than sulphide content), which is conservative. This approach to ARD classification is based on observed trends in rock chemistry, mineralogy, and reactivity of neutralizing minerals (Golder 2016).

The ARD potential of waste materials from Whale Tail Pit are classified first based on total sulphur content and then using the NPR-based guidelines published by MEND (2009). Total sulphur will be used as an initial screening criteria to identify NPAG material, whereby a sample will be considered NPAG when it contains less than 0.1 wt% sulphur, regardless of the NP (Golder 2016). Where total sulphur is above 0.1%, the calculated carbonate NPR value will be used for sample classification and summarized in Table 3.2 of the ARD-ML Management Plan.

The cut-off content to determine PAG and NAG material has been selected to ensure sufficient neutralization potential and thus, it is Agnico Eagle's intent to continue to operate in compliance with the approved Operational ARD-ML sampling and Testing Plan (Version 5, April 2019).

Reference:

Golder (Golder Associates Ltd.). 2016. Evaluation of the Geochemical Properties of Waste Rock, Ore, Tailing, Overburden and Sediment from the Whale Tail Pit and Road Aggregate Materials, Agnico Eagle Mines, Meadowbank Division. Document No. 042. June 2016.

3.1.2 Ore Properties

Reference: Section 6.1 – Ore Properties

Comment 2: The Proponent states “The delay to onset of ARD from ore is expected to be substantially longer than the seven years LOM.” ECCC notes that the statement above does not provide sufficient detail on what will cause the delay of the onset of ARD. The Proponent does not clarify whether this delay is caused by presence of neutralization potential, or that there will be no reaction until the stated delayed onset.

Recommendation 2: ECCC requests that the Proponent provide additional detail on the anticipated delay to the onset of ARD, including a description of the mechanisms that are likely to lead to this delay.

Agnico Eagle's Response:

Kinetic leaching tests, mineral depletion calculations and consideration of the scale and site differences between laboratory tests and field conditions suggest a time lag to possible ARD development in the ore (and waste rock) at the site of more than a decade (Section 4.7.5, FEIS Amendment Volume 5, Appendix 5-E). Mineral depletion calculations provide an estimate of time to depletion of acid generating (sulphide) minerals and acid-consuming minerals (carbonates), and thus can be used to evaluate the likelihood of the generation of ARD and approximate time to onset of ARD. Theoretical mineral depletion calculations for pyrite and buffering capacity were completed based on the MEND (2009) guidance using ABA data, the measured kinetic test sulphate and alkalinity release rates, and the leachate volumes, which assumes that the depletion of the neutralization potential occurs theoretically at the same rate as the experimentally determined sulphate production rate. The rate of dissolution of buffering minerals depends on the rate of sulphide mineral oxidation and effectiveness of the available



buffering minerals. The rate of sulphide mineral oxidation and neutralization potential NP dissolution under laboratory conditions is accelerated compared to site conditions due to several factors; including slower sulphide mineral oxidation kinetics at lower site temperatures; winter freezing conditions at site; and the lower rock to liquid ratio in the field that slows the rate of buffering mineral dissolution

3.1.3 Waste Rock Storage Facilities Design

Reference: Section 5.3 – Project Waste Rock Storage Facilities Dimensions; Section 6.3.2 – Underground Operations

Comment 3: The Proponent states that “the current design and overall sideslope angle of the Project WRSFs is 2.5V:1V, an angle generally considered stable for such a facility (see Figure 5.1 for a typical cross section)”. The Proponent also states in section 6.3.2 (Underground Operations) that “The sideslope angle of these ore stockpiles will be 3V:1V, an angle generally considered stable for such facility” It is not clear to ECCC whether this is a typographical error, and that 2.5H:1V & 3H:1V was intended instead of 2.5V:1V & 3V:1V.

Recommendation 3: ECCC requests that the Proponent clarify the sideslope angle dimensions for the WRSF and ore stockpiles.

Agnico Eagle’s Response:

The sideslope angle dimensions for the WRSF are 2.5H:1V and the sideslope angle dimensions for the ore stockpiles are 3H:1V. This will be corrected in the next version of the Whale Tail Pit Waste Management Plan.

3.2 Crown-Indigenous Relations and Northern Affairs Canada

3.2.1 Whale Tail Waste Rock Storage Facility Mitigation Measures

Comment 1: The Waste Rock Management Plan, Section 5.2.2.1: Whale Tail Waste Rock Storage Facility (WRSF) indicates the following:

In August 2019, seepage from WRSF Pond reported through the structure towards Mammoth Lake. Immediate actions were undertaken to remediate the situation, including pumping water downstream of the structure, and maintaining the pond dry. Additional actions were taken prior to freshet 2020, to promote permafrost into the dike foundation, as well as the construction of a more robust water collection system. Refer to the Water Management Plan for additional details on water management of the Whale Tail WRSF.

CIRNAC considers construction works and mitigation measures associated with water management at the waste rock structures to be significant to waste rock management, and as such suggests that actions and construction works related to the Whale Tail WRSF, the IV WRSF or the Underground WRSF be available in the Waste Rock Management Plan.

Recommendation 1: CIRNAC recommends that AEM include the details pertaining to the water management of the Whale Tail WRSF, the IV WRSF and the Underground WRSF in the Waste Rock Management Plan.



Agnico Eagle's Response:

Details on water management related to the WT WRSF, IVR WRSF and Underground WRSF are referenced in the Water Management Plan which is also available to CIRNAC. This is made in an effort to avoid duplication of information which is a common source of error. Agnico could indicate the section of interest for easier reference.

3.2.2 Adaptive Management

Comment 2: In the Waste Rock Management Plan, Section 9.4: Adaptive Management, AEM indicates that the Whale Tail Pit Expansion Adaptive Management Plan is under review, and further; "For more details on the adaptive management actions Agnico Eagle is planning to implement related to the Waste Rock Storage Facilities, please refer to the ARD/ML plan (Section 5, table 5.1)."

CIRNAC notes that it is unclear how the list in Table 5.1: Anticipated ARD/ML Potential of Waste Rock Types at Whale Tail (Golder, 2018b), comprises the details of the adaptive management actions.

Recommendation 2: CIRNAC recommends that AEM review and update the reference to Section 5, Table 5.1, made in Section 9.4 of the Waste Rock Management Plan.

Agnico Eagle's Response:

Agnico Eagle will correct the reference in Section 9.4 of the Waste Management Plan; it should refer to Section 5, Table 5.1 of the Operational ARD/ML Testing and Sampling Plan (Version 5, 2019).

4 Emergency Response Plan

4.1 Crown-Indigenous Relations and Northern Affairs Canada

4.1.1 Frequency of Emergency Response Preparedness (ERP) Testing

Reference: Emergency Response Management Plan, Section 1.1

Comment 1: AEM states that Emergency Response trainings are conducted annually. In the Emergency Response Management Plan, Section 1.1, AEM's Policy Statement, the section reads as follows: "ERP will be tested on a periodic basis to ensure its effectiveness." From this statement, the frequency of testing is unclear. It is also not clear if drills are carried out to test the effectiveness of the emergency response programs, and if so, how often they are performed.

Recommendation 1: CIRNAC recommends that AEM revise this section to clarify the frequency of Emergency Response Preparedness (ERP) testing.

Agnico Eagle's Response:

Agnico Eagle acknowledge CIRNAC's recommendation and will change the wording to 'ERP will be tested annually to ensure its effectiveness' in the next revision of the management plan.



4.1.2 Emergency Response Management Personnel

Comment 2: AEM appears to have the same emergency response management personnel responsible for the Meadowbank and Whale Tail (AMQ) sites. This arrangement could cause some confusion making the emergency response ineffective and inefficient, thereby exposing people or the environment to a greater risk. It is not clear how AEM plans to mitigate the risk posed by this arrangement.

Recommendation 2: CIRNAC recommends that AEM provide the rationale for how they plan for the same personnel to efficiently manage the emergency response for the two different project sites

Agnico Eagle's Response:

The current system is set up to ensure that Agnico have all of the management team notified of any emergency when they are at either site. They then assemble to form a single control group that is located around two separate boardroom tables but act as a single unit and coordinate the response in the field.

5 Quality Assurance / Quality Control (QA/QC) Plan

5.1 Crown-Indigenous Relations and Northern Affairs Canada

5.1.1 Fill Level for Sample Bottles

Comment 1: The Quality Assurance & Quality Control (QA/QC) Plan states in section 2.2.2, "The bottles are filled properly to allow mixing, preservative addition and thermal expansion." This statement contradicts section 2.2.4 Table 2-1 which indicates the bottles are filled to the top. It is not clear on the actual level to which the bottle will be filled to allow for mixing, preservative addition and thermal expansion.

Recommendation 1: CIRNAC recommends that AEM clarify the actual specific level to which the bottles will be filled to allow for mixing, preservative addition and thermal expansion.

Agnico Eagle's Response:

Agnico Eagle acknowledges CIRNAC's recommendation and will clarify the process in the next revision of the QAQC plan. However, Section 2.2.2 and 2.2.4 does not contradict. The bottles are filled properly to allow mixing, preservative addition (if needed as most of the bottle arrived on site pre-rinsed and pre-preserved) and thermal expansion as per the requirement of Table 2-1 in Section 2.2.4. This Table 2-1 was updated by the accredited laboratory that follow the best practices requirement for sampling.

5.1.2 Relative Percent Difference (RPD)

Comment 2: In the Quality Assurance & Quality Control (QA/QC) Plan, Section 4.2, Data Verification, Relative Percent Difference (RPD) and RDP were used concurrently. It is not clear whether the two acronyms have the same or different meanings.



Recommendation 2: CIRNAC recommends that AEM clarify whether there are one or two meanings for the acronym RDP. If the meanings are the same, a consistent acronym should be used. If there are two meanings, a different acronym should be used to ensure consistency.

Agnico Eagle's Response:

Agnico Eagle appreciates CIRNAC's comment. There is only one acronym (RPD) associated to the relative percent difference. Agnico will corrected the typos, change RDP by RPD, found in section 4.2 of the plan in the next revision.