



February 4, 2019

Richard Dwyer  
Manager of Licensing  
Nunavut Water Board  
Gjoa Haven, NU X0B 1J0

**RE: Reply to Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC), Natural Resources Canada (NRCan), Environment and Climate Change Canada (ECCC) and Kivallik Inuit Association (KIA) responses regarding an amendment to Type "A" Water Licence No: 2AM-MEA1526 associated with the In-Pit Tailings Disposal Modification Proposal – Meadowbank Gold Mine Project.**

Dear Mr. Dwyer

Agnico Eagle acknowledges receipt of the responses of CIRNAC, NRCan, ECCC, and KIA filed with the Nunavut Water Board (NWB) on January 31, 2019. Please find enclosed Agnico Eagle's responses to those comments.

NRCan's technical issues have been resolved. In general, NRCan's comments can be summarized as suggested activities to improve future monitoring. In Agnico's view, these comments should generally be deferred to the Interim and Final Closure and Reclamation Plans. NRCan confirmed in its letter of January 31, 2019 that NRCan considers its comments on modelling complete.

Similarly, ECCC has confirmed that it is satisfied with Agnico's responses and has no further technical review comments, and suggests that its issues can be addressed through ongoing monitoring and development of the Final Closure and Reclamation Plan. Agnico agrees.

CIRNAC confirmed that its outstanding technical concerns with respect to the In-Pit Disposal amendment can be addressed through monitoring and updates to the Interim and Final Closure and Reclamation Plans. Agnico commits to update the Interim Closure and Reclamation Plan (ICRCP) to incorporate the commitments listed in the enclosed table and submit to the NWB by March 1 2019.

As NRCan, ECCC and CIRNAC have all confirmed that their technical issues can be resolved through monitoring and updates to the Interim and Final Closure and Reclamation Plans, Agnico's interpretation of KIA's submission of January 31, 2019 is that KIA would also be satisfied that the outstanding technical issues have been resolved.

In response to the KIA's comment that the public needs the opportunity to be heard by the NWB, Agnico has outlined its approach to public consultation and confirmed that a public hearing is not necessary in order to ensure that this important goal be met. NRCan and ECCC

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also noted that from their perspective, no public hearing is required. Agnico disagrees with CIRNAC's opinion that a public hearing is required in relation to the In-Pit Disposal application, and has responded specifically to the points CIRNAC raised in its January 31, 2019 submission in the attached table.

Should you have any questions regarding this letter, please do not hesitate to contact me.

Sincerely,

Jamie Quesnel

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819.856.8021.

Superintendent Permitting and Regulatory Affairs – Nunavut

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<b>Party</b>	<b>Comment</b>	<b>Response</b>
KIA	KIA can advise that they are satisfied, subject to confirmation being received by the NWB from each of CIRNAC, ECCC and NRCan that their concerns have been addressed. KIA relies on the expertise of these parties, so if they can indicate they are satisfied, then KIA has no concerns.	Noted.
KIA	Further, in response to your request for input as to whether or not KIA feels a public hearing should be held in respect of this Application, KIA believes that the public needs the opportunity to be heard by the NWB.	<p>Agnico Eagle would like to clarify that in addition to the public consultation opportunities offered through the Nunavut Impact Review Board (NIRB) and NWB processes, two public consultations were completed in 2018 at Baker Lake which as provide opportunities for Indigenous people and organizations to be heard. These efforts were considered by the Honourable Minister Dominic Leblanc in his decision letter regarding the Meadowbank In-Pit Disposal Modification project addressed to the Nunavut Impact Review Board issued on November 27, 2018.</p> <p><i>“The impact assessment conducted by the Review Board has provided many opportunities for engagement and consultation of Indigenous people and organizations. Following the release of the Review Board’s Report, further input was sought from the Kivalliq Inuit Association in the form of correspondence issued by the Northern Project Management Office. No outstanding concerns were expressed by the Designated Inuit Organization with respect to their ability to engage in the assessment process or with the determination of the Review Board. The thorough and inclusive assessment process conducted by the Review Board, coupled with effective responses to issues raised by Indigenous participants, has led the other Responsible Ministers and me to conclude that there has been adequate and meaningful consultation with affected Indigenous groups”</i></p> <p><b>Agnico considers this comment resolved.</b></p>
NRCan	As NRCan does not have a regulatory role, we do not have a position regarding the requirement for a Public Hearing. NRCan defers to regulatory bodies to determine whether or not the requirement for a Public Hearing can be waived. However, NRCan does not require a Public Hearing to address any issues within NRCan’s mandate.	<p>Agnico confirms it agrees with NRCan that a public hearing is not required in relation to the In-Pit Disposal Modification/Amendment.</p> <p><b>Agnico considers this comment resolved.</b></p>



<b>Party</b>	<b>Comment</b>	<b>Response</b>
NRCan 1	<p>AEM's (2019) reply has indicated the specific objectives of their groundwater monitoring. NRCan recommended that explicit goals for the groundwater monitoring program be established "within the context of the overall monitoring expectations of the regulators." NRCan also recommended that it "would be helpful if the groundwater monitoring program could specifically indicate what parameters or variables are to be measured or validated (e.g., contaminant fluxes to lakes, contaminant concentrations in lakes or contaminant concentrations in groundwater discharge)." NRCan defers to the regulators to define expectations as to what parameters or variables need to be met and where. For example, NRCan does not know to what extent the possible discharge of contaminated groundwater into the Third Portage Lake (Pit Lake) beginning in approximately 600 years is an issue of concern to the regulators. If so, where will water quality guidelines need to be met (in the groundwater discharge/benthic zone, in the bottom of the lake or in the lake as a whole)? These questions have important consequences for the locations, methods and duration of monitoring. The proponent has indicated that the groundwater discharge will be diluted in the lake such that the whole lake concentrations are predicted to be below guidelines.</p> <p>NRCan also recommended that "The proponent, in consultation with appropriate regulators, should also indicate the anticipated duration of the monitoring." The proponent's response does not address the anticipated duration of monitoring. A monitoring program designed to monitor for years to decades could be very different than a program designed to monitor for centuries or millennia. The positioning of monitoring wells should take into consideration the anticipated duration of monitoring. As discussed with respect to the proponent's breakthrough curves (NRCan, 2019), most existing monitoring wells are not expected to respond noticeably to contaminants for millennia. Furthermore, groundwater flow through tailings deposited into Pit A (i.e. displacing tailings pore waters) may only begin to discharge significantly to Third Portage Lake in several hundred years. NRCan recommends that the regulators establish the approximate expected duration of the monitoring program, and that the duration be consistent with the goals and expectations of the monitoring program(s) and the parameters to be monitored.</p>	<p>Agnico acknowledges NRCan's recommendation and will continue to work with the regulators to define the closure groundwater monitoring program as part of the Interim and Final Closure and Reclamation Plans.</p> <p><b>Agnico considers this comment resolved.</b></p>



<b>Party</b>	<b>Comment</b>	<b>Response</b>
NRCan 2	<p>NRCan agrees with the proponent that the monitoring well locations should not be selected solely on basis of the simulated groundwater plume and that they should include consideration of field data such as fracture observation, borehole logging, packer testing and thermal profiling. NRCan also agrees that breakthrough curves are a suitable approach to help plan and evaluate groundwater monitoring locations (from the simulation results) as they include the processes of advection, dispersion and diffusion. However, NRCan notes that the location of monitoring wells cannot be made on the basis of field observations alone and must also take into consideration the predictions of groundwater flow and plume migration.</p> <p>As noted in the proponent response to NRCan comment #1, the current groundwater monitoring wells were located on basis of groundwater flow paths during the mining of the pits. One should not expect these same wells to be suitably located for future monitoring following the flooding of the pits. NRCan's analysis of the proponent's simulated breakthrough curves and plume patterns (NRCan, 2019) concluded that the monitoring wells were not located in the main path of the predicted contamination plumes and therefore did not make effective monitoring wells for post-closure. Specifically, NRCan observed that 6 of the 8 monitoring wells are predicted to remain below 1 mg/L chloride (from the tailings) for more than 6000 years. The proponent did not respond to this statement.</p> <p>NRCan is still of the opinion that the current monitoring network will not be effective for post-closure because it appears that most monitoring wells are not located along the direct flowpaths of the groundwater plumes and their locations are predicted to require millennia before increases in contaminant concentrations would be observable. NRCan had recommended that backwards particle tracking be used as a further test of the monitoring well locations with respect to the contaminant plumes. However, in NRCan's opinion, the breakthrough curves are sufficient to demonstrate the predicted ineffectiveness of the monitoring network without the backward particle tracking.</p>	<p>Agnico acknowledges NRCan's recommendation and will consider running backwards particle tracking to confirm the monitoring well locations with respect to the contaminant plumes that will be define after updating the hydrogeological model with data collected during operation as part of the Final Closure and Reclamation Plan.</p> <p><b>Agnico considers this comment resolved.</b></p>
NRCan 3	NRCan is satisfied that the proponent has stated that they will consider NRCan's recommendation with respect to the installation of new monitoring wells as	Agnico confirms again that it will consider NRCan's recommendation and also confirms that it will continue to incorporate data from the five



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	part of the final closure plan and that their locations, depths and screen lengths will consider monitoring results and model updates to ensure they intercept the plume. NRCan was not aware that five piezometers were installed as part of each groundwater monitoring location. Such data should be incorporated into model calibration, verification and update.	piezometers into model calibration, verification and update.  <b>Agnico considers this comment resolved.</b>
NRCan 4	The low concentration sample described by the proponent in response to this comment appears to be collected from the open talik rather than sub-permafrost groundwater. The description of borehole BH10-1 in the seepage zone of the former Second Portage Lake implies that this site would have sampled discharging sub-permafrost groundwater. NRCan cannot assess if this is the case. The response does seem to acknowledge the possible presence of sub-permafrost groundwater of sufficient salinity to result in density dependent flow. NRCan has raised the issue of sub-permafrost water quality to ensure that it be considered; however, NRCan deems the issue of discharging pore water tailings to Third Portage Lake (from tailings in Pit A) to warrant more attention than the discharge of saline subpermafrost groundwater.	The focus of all existing modelling was related to tailings pore water concentrations towards Third Portage Lake and Agnico will continue to monitor and validate the predictions from our existing modeling.  <b>Agnico considers this comment resolved.</b>
NRCan 5	NRCan made the suggestion of installing a monitoring well into the sub-permafrost groundwater at the north end of Pit A. The proponent believes that the model (V.4) is sufficiently conservative to assess potential upward groundwater flow into Third Portage Lake (Pit Lake). Both NRCan and the proponent acknowledge the difficulty of installing such a well. The proponent will explore the potential of installing a groundwater monitoring station near Pit A as part of the final closure plan. NRCan has no more comments concerning this suggestion.	Agnico acknowledges and will follow NRCan's suggestion to explore the potential of installing a groundwater monitoring station near Pit A as part of the Final Reclamation and Closure Plan..  <b>Agnico considers this comment resolved.</b>
ECCC	If the NWB determines a Public Hearing is not necessary and the requirements of the <i>Nunavut Waters and Nunavut Surface Rights Tribunal Act</i> Section 52 (2) are adhered to, ECCC would be comfortable with the cancellation of the Public Hearing. This process ensures that all interested parties and local communities are given an opportunity to be heard before a decision is made to forgo the Public Hearing requirement.	Agnico agrees that no public hearing is necessary in relation to this application, and that the process that NIRB and NWB has undertaken in relation to this application has ensured that interested parties and local communities have been given the opportunity to be heard.  However, Agnico notes that in its view, the reason that a hearing is not required in respect of this application is not section 52(2) of the NWNSRTA, but instead section 52(1)(a), which provides that a public



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		<p>hearing is not required where the application is of a class that is exempted by the regulations from the requirement of a public hearing. As set out in section 9(a) of the Nunavut Waters Regulations, no public hearing is required in respect of an application for (a) an amendment to a type A licence that does not affect the use, flow or quality of waters or alter the term of the licence.</p> <p><b>Agnico considers this comment resolved.</b></p>
CIRNAC	With respect to a technical meeting, CIRNAC feels their comments can be satisfactorily addressed within the written comment period. Therefore, CIRNAC is comfortable in waiving the requirement for the technical hearing.	<p>Agnico agrees that no technical meeting or technical hearing is required in respect of this application.</p> <p><b>Agnico considers this comment resolved</b></p>
CIRNAC	With respect to a public hearing, CIRNAC's perspective is that a public hearing should be held. Section 9 (1) (a) of the Nunavut Waters Regulations waives the requirement for a public hearing where there is no change in water use, flow or quality. CIRNAC sees this amendment as a new 'use' of water as it will now serve as a tailings cover. The amendment also risks affecting the quality of water as it involves a new deposition of waste into waters that are meant to be reconnected with the natural environment.	<p>Agnico does not agree with CIRNAC's comments.</p> <p>Agnico does not agree that the reflooding constitutes a "new use" of water in these circumstances.</p> <p>"Use" is defined in the NWNSTRA as follows:</p> <p>use, in relation to waters, means a direct or indirect use of any kind, including, but not limited to,</p> <p>(a) any use of water power and geothermal resources;</p> <p>(b) any diversion or obstruction of waters;</p> <p>(c) any alteration of the flow of waters; and</p> <p>(d) any alteration of the bed or banks of a river, stream, lake or other body of water, whether or not the body of water is seasonal.</p> <p>However, it does not include navigation or any other use connected with shipping activities that are governed by the Canada Shipping Act, 2001.</p> <p>The area is within an existing disturbance area of the mine and the approved closure strategy always involved reflooding these pits. Therefore, the flooding of the pits is not a "new use." There is no new diversion or use of water triggered by the In-Pit</p>



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		<p>Disposal Modification/Amendment.</p> <p>Instead, the In-Pit Disposal Modification/Amendment is focused on a change to the handling of "waste", specifically the placement of tailings in a previously disturbed mining area that Agnico is already permitted to place waste rock into. This has been allowed since 2007.</p> <p>As confirmed in this document, there are no outstanding technical issues and Agnico does not agree with CIRNAC's suggestion that the In-Pit Disposal Modification/Amendment "risks affecting the quality of water".</p> <p>If the NWB adopts the broad interpretation of the NWNSRTA and Nunavut Water Regulations that CIRNAC suggests, effectively any amendment to a type A water licence would trigger a public hearing, which is contrary to the intent of the NWNSRTA and the Nunavut Waters Regulations.</p>
CIRNAC	Flooding strategy - resolved.	<b>Agnico considers this comment resolved.</b>
CIRNAC	With respect to the Interim Closure Reclamation Plan (ICRP), CIRNAC's comment is unresolved. CIRNAC expects a term and condition be added to the water licence requiring an updated ICRP be approved by the NWB prior to any deposition of material in either pit specified in the In-Pit Tailings Disposal Modification Proposal. The updated ICRP shall specify that an assessment of the material deposited to date and pore water monitoring will be completed to inform mitigative measures, such as the depth of water cover and details of aggregate cover required, to comply with flooded pit water quality objectives - and that those mitigative measures are carried out in the event the ICRP is implemented.	<p>Agnico has committed to update the ICRP to specify that an assessment of the material deposited to date and pore water monitoring will be completed to inform mitigative measures, such as the depth of water cover and details of aggregate cover required, to comply with flooded pit water quality objectives.</p> <p>While Agnico agrees to update the ICRP, it does not agree that it is necessary or appropriate to amend the water licence to provide that an updated ICRP must be approved by the NWB prior to any deposition of material in either pit specified in the In-Pit Tailings Disposal Modification Proposal.</p> <p>The ICRP will be updated by March 1 2019.</p>
CIRNAC	Further to recent comments provided by ECCC and DFO regarding installation of an aggregate cover over the in-pit tailings, CIRNAC is proceeding with an incremental value of security of \$5.9M. For further clarity, AEM's revised security that was submitted to the NWB on December 13, 2018 was for a total of \$83,551,136. The existing security for Meadowbank is \$86,519,614. Based on this additional \$5,876,610, the	CIRNAC presented two ICRP and security scenarios in the CIRNAC reply to NWB notice of application and commencement of technical review of an amendment to Type "A" Water Licence No: 2AMMEA1526 associated with the In-Pit Tailings Disposal Modification Proposal – Meadowbank Gold Mine Project1. Agnico Eagle agreed to the incremental value associated with the ICM costs is





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Party	Comment	Response
	Meadowbank security will be raised by \$2,908,132 for a total security value of \$89,427,746.	<p>estimated to be on the order of \$1.1M presented in the Scenario 1.</p> <p>Agnico Eagle does not agree with the Scenario 2 – Tailings In-Pit Deposition with Cover which suggests an incremental value of the security associated with such efforts is estimated to be on the order of \$5.9M as the need for a cover above the tailings has been resolved with ECCC and DFO. <b>CIRNAC should take into account that ECCC and DFO considers those comments to be resolved, and should not proceed with the \$5.9M incremental value.</b></p> <p>As background, in the CIRNAC reply to NWB notice of application and commencement of technical review of an amendment to Type “A” Water Licence No: 2AMMEA1526 associated with the In-Pit Tailings Disposal Modification Proposal – Meadowbank Gold Mine Project (see Crown-Indigenous Relations and Northern Affairs Canada, 2019. Re: Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) reply to Nunavut Water Board’s (NWB) notice of application and commencement of technical review of an amendment to Type “A” Water Licence No: 2AMMEA1526 associated with the In-Pit Tailings Disposal Modification Proposal – Meadowbank Gold Mine Project. January 17, 2019), CIRNAC referred to comments provided by ECCC and DFO regarding the installation of an aggregate cover over the in-pit tailings issued on August 3, 2018 (see Environment and Climate Change Canada. 2018. Environment and Climate Change Canada’s Technical Review Comments to the Nunavut Water Board, Respecting the Meadowbank In-Pit Tailings Disposal Modification Submitted by Agnico Eagle Mines Limited. August 3, 2018. (ECCC#3: Mitigation – Capping of Tailings and Fisheries and Oceans Canada. 2018. Fisheries and Oceans Canada, Technical Review Submission to the Nunavut Water Board, Agnico Eagle Mines Limited Meadowbank Gold “In-Pit Tailings Disposal Modification” Project Proposal. August 3, 2018. (DFO#3.1).</p> <p>However, Agnico Eagle refers CIRNAC to the most recent comments from DFO issued on January 16, 2019:</p> <p>“DFO-FPP has reviewed AEM’s application in accordance to its mandate to maintain the sustainability and ongoing productivity of</p>



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		<p>commercial, recreational and Aboriginal fisheries. DFO-FPP has no comments at this time regarding the Water Licence Application Amendment.”</p> <p>And the most recent comments from ECCC issued on January 31, 2019:</p> <p>“Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Water Board (NWB) regarding the above-mentioned responses to ECCC’s technical review comments. ECCC is satisfied with the Proponent’s responses, and will not have any further technical review comments for this Water Licence Amendment. The remaining uncertainties with sediment (tailings) arsenic behaviour and/or the need for sequestration with rock cover can be addressed through ongoing monitoring and development of the final closure plan.”</p> <p><b>While Agnico and CIRNAC have not yet reached consensus on this issue, Agnico is of the view that this is not an issue that requires resolution via public hearing.</b></p>
CIRNAC	AEM has not followed-up with CIRNAC to review and finalize security.	At Agnico's last meeting with CIRNAC, they indicated they would reach out to Agnico with any follow up needed. CIRNAC did not indicate to Agnico that they had any outstanding questions about security, and so it was Agnico's assumption that given the confirmation of DFO and ECCC within the NWB process that their technical issues were resolved, CIRNAC was no longer of the view that the \$5.9M incremental value was appropriate security.
CIRNAC	<p>The performance of the thermal and hydrogeological modelling has been satisfactorily improved. However, CIRNAC is in agreement with NRCAN on the ineffectiveness of the current and proposed groundwater monitoring network noting that the sparse monitoring network will be unable to provide information useful for model validation, particularly for the ICRP and prior to closure which informs the Final Closure and Reclamation Plan.</p> <p>CIRNAC therefore agrees with and reiterates NRCAN’s</p>	<p>Agnico confirms that NRCAN's recommendations 1, 2, 3 and 4 will be considered in the next update of the ICRP and Final Closure and Reclamation Plan.</p> <p><b>Agnico considers this comment resolved.</b></p>



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	recommendations #1, #2, #3 and #4, and has the following responses, and terms and conditions to inform the ICRP and Final Closure and Reclamation Plan.	
CIRNAC	CIRNAC concurs the current groundwater monitoring plan is for the operation phase, and that the ICRP and Final Closure and Reclamation Plan will address groundwater monitoring commitments during closure and post-closure. During the technical review of the ICRP and Final Closure and Reclamation Plan, the groundwater monitoring plan for closure and post-closure will be assessed. CIRNAC considers this comment resolved.	<b>Agnico considers this comment resolved.</b>
CIRNAC	CIRNAC agrees with NRCAN that the monitoring well locations should not be selected solely on the basis of the simulated groundwater plume and that they should include consideration of field data such as fracture observation, borehole logging, packer testing and thermal profiling. CIRNAC also agrees that breakthrough curves are a suitable approach to help plan and evaluate groundwater monitoring locations (from the simulation results) as they include the processes of advection, dispersion and diffusion. The current groundwater monitoring wells were located on the basis of groundwater flow paths during the mining of the pits. One should not expect these same wells to be suitably located for future monitoring following the flooding of the pits. CIRNAC therefore reiterates that the breakthrough curve analysis in conjunction with field data be used to select future monitoring well locations, and that the monitoring well locations are installed and monitored as a term and condition in the water licence of the ICRP and Final Closure and Reclamation Plan.	Agnico refers CIRNAC to NRCAN comments #2.  <b>Agnico considers this comment resolved.</b>
CIRNAC	CIRNAC is satisfied that AEM has stated that they will consider NRCAN's recommendation with respect to the installation of new monitoring wells as part of the ICRP and Final Closure and Reclamation Plan, and that their locations, depths and screen lengths will consider monitoring results and model updates to ensure they intercept the plume. CIRNAC considers this comment resolved.	<b>Agnico considers this comment resolved.</b>
CIRNAC	AEM's response does seem to acknowledge the possible presence of subpermafrost groundwater of sufficient salinity to result in density dependent flow.	Agnico refers CIRNAC to NRCAN comments #5.  <b>Agnico considers this comment resolved.</b>



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<b>Party</b>	<b>Comment</b>	<b>Response</b>
	CIRNAC will further assess the monitoring of sub-permafrost water quality and calibration of the thermal and hydrogeological modelling as part of the ICRP and Final Closure and Reclamation Plan.	
CIRNAC 12	AEM has committed in their January 23, 2019 submission to “optimize and adapt the location of the monitoring wells as part of the final closure plan in collaboration with the regulators. In addition, available thermistors and piezometer across the site will continue to be monitored and used to update the hydrogeological model and update the groundwater monitoring plan.” CIRNAC reiterates that this commitment be captured as a term and condition in the water licence.	Agnico does not agree that this commitment should be captured as an amendment to the water licence. Anico Eagle suggests to the NWB to include these monitoring commitments into an updated version of the Tailings Storage Facility: Operation, Maintenance and Surveillance Manual as per Licence 2AM-MEA1525 Part B condition 13. This update could be completed following the approval of the in-pit deposition amendment.