AGNICO EAGLE

Meliadine Extension

Response to Technical Comments

Submitted to:

Nunavut Impact Review Board

Submitted by:

Agnico Eagle Mines Limited – Meliadine Division

November 8, 2022

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NUNAVUT TUNNIGAVIK INC. (NTI)

Interested Party:	**NTI**	**Rec No.:**	**NTI-TC-01**
Re:	**Review**		

Request Made by Interested Party:

In this review process, NTI will play a supporting role to the KIA, KWB, KHTO and other Kivalliq HTOs bringing Inuit issues and concerns relating to the Proposal to the attention of the NIRB. At this juncture, NTI does not have additional technical comments from those of KIA and the other organizations participating in this review.

Agnico Eagle's Response to Request:

Agnico Eagle appreciates the comments from NTI and looks forward to discussions through the NIRB process.

KIVALLIQ INUIT ASSOCIATION (KivIA)

Interested Party:	**KivIA**	**Rec No.:**	**KivIA-TC-01**
Re:	**Caribou exposure to the windfarm**		

Request Made by Interested Party:

1. As per KivIA-IR-3, KivIA continues to request an overall assessment and analysis of caribou movement through the mine site, windfarm, Tiriganiaq-Wolf mining area and potential airstrip integrating Inuit Knowledge, the mapped visible trails and collar data.

2. KivIA recommends a Term and Condition that requires Agnico Eagle to integrate IQ, historical and current trails, and collar data to analyze caribou movements approaching and in the vicinity of the mine site and windfarm.

Agnico Eagle's Response to Request:

Response 1)

The map provided in response to KivIA-IR-3 covers trails around the mine site and the Tiriganiaq-Wolf mining area and includes collaring data to 2019. Trail mapping was completed in the summer of 2021 capturing behaviour after 2019. Remote camera studies completed in 2020 and 2021 are consistent with IQ provided in the map in response to KivIA-IR-3, and is outlined in Appendix 26 of the 2021 Annual Report.

Agnico Eagle commits to continue to monitor caribou through annual monitoring, which includes behavioural monitoring, and camera programs around the windfarm. Monitoring will continue prior to and during construction of the windfarm. Agnico Eagle also continues with the collection and validation of IQ. On the other hand, collaring data is an integral part of monitoring and Agnico Eagle continues to work with the GN who provides Agnico Eagle with the data.

As cited in the Caribou and Wind Turbines (Kivalliq Region) (Hayne 2010) "*Adding a turbine within a community or minesite which already has an effect (Zone of Influence) on caribou will have less negative effect than placing a turbine in a location away from the existing development (Campbell, 2022).*"

Response 2)

Agnico Eagle does not believe a new Term and Condition is required. There are multiple conditions related to the monitoring of caribou.

Specifically related to IQ, Term and Condition 44 was updated during the Waterline Application as outlined below:

> *In consultation with the Government of Nunavut (GN) and other relevant parties, such as the Terrestrial Advisory Group, the Proponent shall further develop its Terrestrial Environment Management and Monitoring Plan (TEMMP) to include increased caribou monitoring across the regional study area and additional details on the scope and design of monitoring programs. The Proponent shall also demonstrate consideration for contributing to existing and planned regional*

monitoring initiatives associated with terrestrial wildlife and wildlife habitat ***and the incorporation of Inuit Qaujimaningit, Inuit Qaujimajatuqangit, Traditional and Community Knowledge, as appropriate****. Monitoring should be adequate to test impact predictions, monitor impact thresholds and trends over time, and to support implementation of mitigation measures as proposed in the Final Environmental Impact Statement and any subsequent Addenda submitted by the Proponent. The Proponent in consultation with the Terrestrial Advisory Group shall revise the 2021 Technical Memorandum entitled "Collared Caribou Meliadine All-Weather Access Road Interactions" describing the crossings and deflections of caribou in relation to the all-weather access road as assessed using caribou collar data and shall provide a copy to the NIRB prior to construction/installation of the waterlines.*

Other Terms and Conditions related to caribou include 43, 45, 46, 47, 48, 54, 56, 118, 119 that encompass the mine site and subsequently the windfarm.

Reference:

Hayne H. 2010. Caribou and Wind Turbines (Kivalliq Region). Presentation to the WWF Iqaluit February 8, 2010 / updated March 2022.

Interested Party:	**KivIA**	**Rec No.:**	**KivIA-TC-02**
Re:	**Effects of the windfarm**		

Request Made by Interested Party:
The KivIA requests that Agnico Eagle add a specific primary pathway to assess impacts on caribou from the windfarm.

Agnico Eagle's Response to Request:
Agnico Eagle believes the windfarm location is better suited at the mine site with existing known activities. We are confident our assessment is complete and the mitigation in our management plans will alleviate any concerns. In addition, as discussed in KivIA-TC-01, monitoring will continue and will be presented through annual reporting and with the TAG.

Interested Party:	**KivIA**	**Rec No.:**	**KivIA-TC-03**
Re:	**Monitoring and mitigation for the windfarm and intensified mine activities**		

Request Made by Interested Party:
The KivIA requests that a new Term and Condition is required:

The Proponent shall develop and implement a monitoring and mitigation plan for construction and operation of the windfarm (wind generators, access roads and associated structures) to ensure that caribou movements are not hindered or deflected. The plan should be an identifiably separate plan cross-referenced to the Terrestrial Environment Management and Monitoring Plan. The plan shall be completed prior to construction of the windfarms.

Agnico Eagle's Response to Request:
Agnico Eagle does not agree that a new Term and Condition is required.

As part of the Meliadine Extension Application, Agnico Eagle submitted a new plan, the Windfarm Management Plan, which is a compilation of environmental protection and mitigation measures and management plans from various sources that are intended to address known and anticipated environmental conditions or events that can occur during the windfarm construction and operations. The Windfarm Management Plan will be reviewed with the TAG and updated prior to the construction of the windfarm, if required. During construction and operation, Agnico Eagle would follow the same mitigation and monitoring as outlined in the TEMMP.

Interested Party:	**KivIA**	**Rec No.:**	**KivIA-TC-04**
Re:	**Surface Contact Water Volumes**		

Request Made by Interested Party:

The Proponent must increase the capacity of the planned waterline to Itivia Harbour such that discharge to Meliadine Lake is minimized relative to current discharge volumes. In a meeting in Winnipeg with KivIA (Winnipeg, Oct 5, 2022), strategies such as increasing waterline flow rate, discharge window, and staging mining operations to facilitate temporary contact water storage were discussed. However, the proponent should consider constructing additional waterlines to Itivia Harbour to manage the Phase 2 extension surface contact water, and to anticipate any future increases in water management requirements.

Agnico Eagle's Response to Request:

Agnico Eagle feels that existing infrastructure is sufficient to minimize discharge to Meliadine Lake and the approved Adaptive Management Plan provides flexibility for the operation to mitigate issues that are outside of the normal operating conditions. The details of the water balance and water quality predictions will be provided as part of the NWB Water Licence Amendment process.

Interested Party:	**KivIA**	**Rec No.:**	**KivIA-TC-05**
Re:	**Surface Contact Water Discharge Quality to Meliadine Lake**		

Request Made by Interested Party:

Agnico Eagle and the KivIA have met to discuss the water management strategy (Winnipeg, Oct 5, 2022), and the following were recommended:

1. Prioritizing CP3, Sewage water, CP5, and CP4 for waterline discharge. These wastewater sources were identified based on higher concentrations of contaminants of concern.

2. Determining whether CP11 and CP12 at the Discovery site would have lower TDS concentrations than other surface contact water managed on site. If so, separating these from the saline water management pathway would allow other, higher priority, surface contact water to be managed through the waterline.

3. When not required for the discharge of saline water, the waterline should continue operating to discharge surface contact water. Unless prevented by safety, maintenance, or other operational concerns, discharge through the waterline should be prioritized over discharge to Meliadine Lake.

Adoption of these recommendations to the Adaptive Management Plan will significantly improve the quality of water discharged into Meliadine Lake.

Agnico Eagle's Response to Request:

Agnico Eagle is evaluating the recommendations discussed with the KivIA during the workshop on October 5, 2022 and will be discussed further through the NWB Water Licence Amendment process.

Interested Party:	**KivIA**	**Rec No.:**	**KivIA-TC-06**
Re:	**Footprint of the Project**		

Request Made by Interested Party:
The KivIA requests that the Proponent provide an accurate project footprint so that the mine lease boundary can be updated.

Agnico Eagle's Response to Request:
Agnico Eagle refers the reader to Table 6.1-1, Table 6.4-4, and Table 6.5-5 of the Meliadine Extension FEIS Addendum which documents the additional hectares of Meliadine Extension that will add to the current NIRB approved footprint.

Agnico Eagle will continue to discuss the Production Lease with the KivIA which is a separate process from the NIRB process.

Interested Party:	**KivIA**	**Rec No.:**	**KivIA-TC-07**
Re:	**Feasibility of grouting to mitigate water inflow to the underground mines**		

Request Made by Interested Party:
The KivIA requests additional information that would demonstrate that grouting will be feasible as a flow mitigation measure at the magnitude and scale expected for the underground extensions.

Agnico Eagle's Response to Request:
Agnico Eagle refers the reader to NRCan-TRC-06 for additional details.

Interested Party:	KivIA	Rec No.:	KivIA-TC-08
Re:	Storage of tailings and waste rock in exhausted open pits		

Request Made by Interested Party:

The KivIA requests that the potential effects of the in-pit storage on the quality of water in the surrounding environment should be assessed during operation and post closure.

Agnico Eagle's Response to Request:

Deposition of tailings and waste rock into exhausted open pits has been presented as an alternative in the Meliadine Extension FEIS Addendum. It is expected that updates and refinements to selected studies will be discussed and evaluated as part of the Type A Water Licence Amendment with the NWB.

Interested Party:	KivIA	Rec No.:	KivIA-TC-09
Re:	Expected closure conditions for the pits that will be used to store tailings and waste rock		

Request Made by Interested Party:

The KivIA requests that the post closure conditions be described and the potential effects be assessed, in this case, on water quality for the closed open pits containing tailings and waste rock to ensure environmental protection.

Agnico Eagle's Response to Request:

Deposition of tailings and waste rock into exhausted open pits has been presented as an alternative in the Meliadine Extension FEIS Addendum. It is expected that updates and refinements to selected studies will be discussed and evaluated as part of the Type A Water Licence Amendment with the NWB.

Interested Party:	KivIA	Rec No.:	KivIA-TC-10
Re:	Inadequate assessment on the social, cultural, and economic wellbeing of Kivalliq residents		

Request Made by Interested Party:

1) KivIA requests that the proponent develop a study of Inuit knowledge and Traditional Knowledge (including Inuit Qaujimajatuqangit) and land use to assess how the Meliadine Extension might affect Kivalliq cultural wellbeing. This study should aim to fill in information gaps related to TC1 and TC2. TC1 requests an overall assessment of caribou movement through the mine site, windfarm, Tiriganiaq-Wolf mining area and potential airstrip integrating Inuit Knowledge, the mapped visible trails and collar, while TC2 is recommending a Term and Condition that requires Agnico Eagle to integrate IQ, historical and current trails, and collar data to analyze caribou movements approaching and in the vicinity of the mine site and windfarm. This work will likely take longer than the NIRB Extension review but would need to be done prior to the commencement of the proposed activity. The study could be completed over the course of six months to a year.

2) The proponent should follow the study in number 1 to prepare and implement a food security strategy that focuses on communications with knowledge holders and with trusted communicators in communities about food security.

Agnico Eagle's Response to Request:

Response 1)

In 2021, Agnico Eagle developed a Kivalliq Elders Advisory Committee comprised of 21 Elders from Baker Lake, Chesterfield Inlet, Rankin Inlet, Whale Cove, and Arviat to identify, validate, and propose various means on how to integrate IQ, Inuit Societal Values (ISV) and community knowledge into exploration, planning, workforce, wellness, and operational plans.

As part of its mandate, the Kivalliq Elders Advisory Committee reviews and validates collectively IQ and community knowledge shared with Agnico Eagle through multiple engagement channels with Kivalliq individuals, communities, and community groups.

As noted above, this work has already been done and will continue but should not delay the NIRB's decision.

Response 2)

Agnico Eagle will work with the KivIA via the IIBA to understand this request and develop a strategy. In the meantime, as noted above in response 1, this program will continue. Further, Agnico Eagle refers Section 9.5.1.1 to the Meliadine Extension FEIS Addendum which outlines that Meliadine Extension may increase resources available for harvesting nutritious country foods.

Interested Party:	KivIA	Rec No.:	KivIA-TC-11
Re:	Economic sustainable development and further investigation of key assumptions		

Request Made by Interested Party:
The proponent should review employment projections and consider specifically:

a. Employment benefits under existing labour trends, and projected ability for Inuit employment targets to be reached;

b. Strategic investments from Agnico Eagle and other agencies, as well as KivIA, to mobilize to address the barriers to the workforce;

c. The economic and social risk of out-migration to community wellbeing should 25% of Agnico Eagle Inuit employees resettle to southern communities.

d. Continued lack of housing for families in the region, which causes outmigration, and strategies to manage and address these barriers strategically and within the project timeframe.

Agnico Eagle's Response to Request:
Agnico Eagle will continue to engage through the IIBA committee and the Socio-Economic Monitoring Committee (SEMC), continue to address these concerns, and discuss with the KivIA. The requests made by the KivIA above are already discussed through the following venues/committees:

a) under the IIBA and the SEMC
b) at the IIBA level
c) at IIBA and SEMC but primarily at SEMC
d) at SMEC

These items will continue to be discussed at the prementioned venues / committees for the duration of the operation.

However, as an example, in 2022 the recruitment approach of our Inuit and Nunavummiut employees was completely redesigned through the launch of Sanajiksanut program. This new approach will be more inclusive, with better work opportunities available to all. The goal is to have a community-based approach when thinking about employment at our Nunavut mines. To have a positive impact for all in the communities where we operate, the program will be continuously adapted based on the local knowledge, social challenges and realities. The program will strive to develop local talents and current employees through various custom-built training programs in partnership with Nunavut Literacy Council and empower our Inuit workforce to build their own legacy within their communities. The Sanajiksanut program is expected to create sustainable job opportunities for marginalized population and contribute to lowering vulnerability and increasing employment stability. This can, in turn, create greater economic outcomes for marginalized individuals and their families, and contribute toward broader territorial economic equality goals.

Interested Party:	KivIA	Rec No.:	KivIA-TC-12
Re:	KivIA lack of support for the proposed airport and windfarm		

Request Made by Interested Party:

1) An in-depth review of citizen concerns and perspectives is required. A structured approach to engagement is needed, such as thorough surveys, interviews or focus groups, and in collaboration with the KivIA.

2) KivIA requires the proponent to prepare an assessment of impacts for the proposed windfarm and airstrip. Such an impact assessment should include consultation with KivIA, IQ knowledge holders, and should explore potential impacts to the social, cultural and economic wellbeing environments. This assessment should be conducted in tandem or potentially considered alongside the previously recommended assessment of Inuit Knowledge and Land Use (see TC10), and not in the context of the NIRB Extension Review.

3) KivIA does not support the windfarm and the airstrip and recommends to NIRB that they not be approved for the Meliadine Extension. Notwithstanding the opposition of the KivIA, the two prior requests are made in the event that the NIRB makes the decision to support these project components.

Agnico Eagle's Response to Request:

Response 1)

Agnico Eagle is in continuous engagement with community members throughout various channels including the Kivalliq Elders Advisory Committee and the Cabin Owners Committee.

Response 2)

Agnico Eagle does not agree for a separate process for the windfarm and airstrip. There is already a process in place (i.e., the NIRB process) which has to consider and include consultation, engagement, and an analysis of potential environmental effects. Agnico Eagle followed the Guidelines, as issued by the NIRB, for the Meliadine Extension FEIS Addendum. Agnico Eagle will continue discussions with the KivIA as things progress.

Response 3)

Agnico Eagle feels strongly that we have met the threshold of the assessment for the windfarm and preliminary components of the airstrip. As mentioned in the Meliadine Extension Application the airstrip is an alternative. If the airstrip is constructed the additional studies will be submitted prior to the construction of the airstrip.

Interested Party:	**KivIA**	**Rec No.:**	**KivIA-TC-13**
Re:	**Proposed Airstrip**		

Request Made by Interested Party:

The KivIA requests that the Proponent complete an analysis of the direct and indirect impacts on the loss of aircraft flights on the annual Federal funding available to the Rankin Inlet airport, local employment and local businesses that the proposed airstrip would cause.

Agnico Eagle's Response to Request:

As mentioned in the Meliadine Extension FEIS Addendum the airstrip is an alternative. If the airstrip is constructed the additional studies will be submitted prior to the construction of the airstrip.

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Interested Party:	SDFN / NDFN	Rec No.:	SDFN/NDFN-TC-01
Re:	Effects of windfarm operations on caribou		

Request Made by Interested Party:
SDFN/NDFN recommend that:

1. A more comprehensive discussion of options for wind turbine placement should have been presented. In addition, a visual impact analysis should be conducted.

2. A larger ZOI (larger than 14 km) should be considered in future monitoring for visual and habitat alteration impacts. Information from other mining projects in similar climatic settings that currently have wind turbines, be collated, and applied if deemed appropriate, for the Meliadine extension windfarm for caribou monitoring.

3. Agnico Eagle should fund specific additional caribou monitoring measures (e.g., drones, on-land observers, shorter fix interval radio-collars, and remote trail cameras). Specific caribou monitoring and mitigation measures should be detailed in the Windfarm Management Plan, following feedback provided by the TAG.

Agnico Eagle's Response to Request:
Response 1)
A pre-feasibility study was completed to execute a comprehensive study to support the wind turbine locations. The pre-feasibility study includes a wind resource assessment that highlights the wind characteristics, long-term wind speed at hub height, and wind resource and projected energy production. A viewshed analysis was provided in Section 9.12.1.2 for the Meliadine Extension FEIS Addendum.

Response 2)
Agnico Eagle does not agree with an increased zone of influence; however, can be further discussed through the TAG.

Response 3)
Agnico Eagle already implements annual monitoring through cameras, on-land observers through operations, we advised the GN to look at different collars, and have evaluated the use of drones. This can be discussed in more detail through the TAG.

Interested Party:	SDFN / NDFN	Rec No.:	SDFN/NDFN-TC-02
Re:	Construction and operation of the waterline between the Discovery Site and the Saline Effluent Treatment Plant (SETP) at the main Meliadine mine		

Request Made by Interested Party:
SDFN/NDFN recommend that:

1. Agnico Eagle should provide schematic profile diagrams of the section between the main Meliadine mine to the Discovery Road intersect (i.e., KM 16+000) with the All Weather Access Road (AWAR), showing the road with the two 16" and one 8" waterlines and profile diagrams for the 10" diameter waterline from the Discovery site on the south side of the Discovery Road.

2. Agnico Eagle should provide a diagram and/or picture of the markers (to be used for waterline mitigation), illustrating their spacing along the waterline route, dimensions, colour, and height above ground level.

3. The fine gravel covering of the three waterlines (the two 16" and one 8") should be feathered out to a 1:6 (rise to run) profile to maintain a constant surface profile for ease of caribou crossing and be designed based on existing topography.

Agnico Eagle's Response to Request:

Response 1)

For the AWAR and the two 16" waterlines, extensive information was provided throughout the Waterline Application process. The process for construction of the waterline to Discovery, which is smaller than the lines going to Itivia, will follow the same construction principles.

Response 2)

The markings will follow the same construction principles as the waterline to Itivia Harbour (e.g., warning signs installed every 200 meters, black in colour to help them stand out in white-out conditions). Further details on the dimensions, height, and colour of the markings can be discussed in the TAG.

Response 3)

Agnico Eagle does not agree with the proposed 1:6 profile. Agnico Eagle will follow the approved construction principles that were developed for slope profiles that were highlighted in the approved Waterline Application.

Interested Party:	SDFN / NDFN	Rec No.:	SDFN/NDFN-TC-03
Re:	Evaluating the Potential Noise Effects of the Meliadine Extension Windfarm		

Request Made by Interested Party:

Agnico Eagle should employ additional remote noise receptors (measuring noise frequencies up to 30 kHz) to establish a baseline level (in noise levels heard by wildlife, as well as humans) and subsequently, test and verify the 2014 Final Environmental Impact Statement (FEIS) model predictions, instead of using 2022 FEIS model predictions to compare against 2014 FEIS model predictions for assessment purposes.

Agnico Eagle's Response to Request:

Quantifying noise effects to wildlife is beyond the scope of any current environmental noise regulation in Canada. As such, even if Agnico Eagle were to measure noise at frequencies beyond the range of human hearing, there would be no accepted method for determining whether or not the noise levels measured are "acceptable". In addition, there is no widely accepted method of modelling/predicting noise levels at the high frequencies being requested; therefore, could not predict future (i.e., Meliadine Extension) noise levels at these high frequencies.

Agnico Eagle proposes that the TAG discuss a "high-frequency" monitoring program with these conditions:

1. Wildlife biologists assist in the design of the study.
2. It has to be clear that the study is "scientific research" and not assessment of regulatory compliance since there are no accepted regulatory thresholds/limits.

Interested Party:	**SDFN / NDFN**	**Rec No.:**	**SDFN/NDFN-TC-04**
Re:	**Residual Effects Assessment related to Caribou**		

Request Made by Interested Party:
SDFN/NDFN recommend that:

1. Focused assessment of the caribou post-calving range near the mine in July should be conducted.

2. Direct and indirect residual cumulative effects from the FEIS addendum extension may need to be re-assessed from the perspective of changed baseline conditions.

3. The TAG should initiate as a top priority, the monitoring, assessment, and reporting of regional and cumulative effects and incorporate this information into the Adaptive Management Plan, to ensure these effects are minimized.

Agnico Eagle's Response to Request:

Response 1)

Agnico Eagle feels our approach was appropriate and as the CESA was the Qamanirjuaq herd post-calving range and was the same as used in the 2014 FEIS. The SDFN/NDFN does not reference the "accurate" post-calving range but states that it is smaller. A smaller range would likely exclude some the developments considered in the cumulative effects assessment for caribou and would not change conclusions. Should it be deemed necessary, further discussion can be held with the TAG.

Response 2)

Cumulative effects included the change in baseline conditions and was part of the Meliadine Extension FEIS Addendum.

Response 3)

If this is deemed a priority of the TAG members, it can be discussed through the TAG.

GOVERNMENT OF NUNAVUT

Interested Party:	**GN**	**Rec No.:**	**GN-TRC-01**
Re:	**Calculation of Chemical Risk Estimates**		

Request Made by Interested Party:

The following recommendations regarding this issue are offered: Revisit the rationale for the dose averaging approach in light of guidance provided on amortization (dose averaging) and TRV selection provided by Health Canada (2010 and 2021); and

Given that the selected TRVs need to match the exposure scenario, provide additional rationale to support the TRV selection, in particular to clarify how the two different PM2.5/PM10 TRVs were relied upon.

Agnico Eagle's Response to Request:

The recreational user was assumed to be present at the cabin location for 30 days per year, for the operations phase of the mine (i.e., 24 years). Based on consultation with the communities, the exposure by the recreational user is expected to be distributed throughout the year, rather than continuous.

Although the exposure is less than 90 days (i.e., chronic), the recreational user is assumed to return to the Site each year throughout the operations phase of the mine, which is consistent with a chronic exposure. To be consistent with the expected exposure duration, chronic TRVs as recommended by Health Canada (2021) were applied.

For the evaluation of $PM_{2.5}$ and PM_{10}, the peak air 24-hour and annual average concentrations were predicted. Risks to the recreational user were calculated using the TRVs for both the 24-hour and annual averaging periods.

Interested Party:	**GN**	**Rec No.:**	**GN-TRC-02**
Re:	**Receptor Identification**		

Request Made by Interested Party:

Understanding how receptors have been identified and where they are located is a key component to appropriately assessing exposures and risk. If receptor locations differ according to exposure type, this should be clearly identified and if locations have changed since previous report submissions, the changes should be detailed, and the implications discussed. Given the identification of threshold contaminants of potential concern for both air and water, additional consideration of toddler health may be warranted. Similarly, if members of the public are expected to utilize the area throughout various life stages (e.g., as a toddler, child, teen, adults), evaluation of risk based on a lifetime exposure (i.e., as a composite receptor) should also be considered for non-threshold contaminants. The following recommendation(s) regarding this issue are offered:

Review currently available information to confirm receptor locations and confirm results of the Human Health Risk Assessment update. Revisit information gathered during the Traditional Knowledge and Consultant process, or further engage with the community, to confirm that adults (20 years and older) are the only individuals expected to be present at the hunting/trapper cabins. If the results indicate other age groups may be present, update the risk calculations as necessary. Revisit information gathered during the Traditional Knowledge and Consultant process, or further engage with the community, to confirm that adults (20 years and older) are the only individuals expected to be present at the hunting/trapper cabins. If the results indicate other age groups may be present, update the risk calculations as necessary.

Agnico Eagle's Response to Request:

Agnico Eagle refers the reader to responses provided in HC-N-1 (comment 2), HC-N-3, and HC-HHRA-3 (comment 1).

Interested Party:	GN	Rec No.:	GN-TRC-03
Re:	Clarity of Air Quality Assessment Approach		

Request Made by Interested Party:
The following recommendation(s) regarding this issue are offered:

Provide additional information related to how the presence of the airstrip may impact the environment and how these impacts were evaluated within the context of the HHRA.

Clarify the reasons for the differences between the 2014 and 2021 air quality assessment approaches and confirm that the 2014 approach addresses the worst-case scenario.

Clarify the approach for evaluating substances as either carcinogenic or non-carcinogenic and the quantitative assessment approach associated with each group.

Agnico Eagle's Response to Request:
Agnico Eagle reiterates the conclusions made in Section 5.2.4 of the Meliadine Extension FEIS Addendum as the predictions of the 2014 FEIS were conservative, and Meliadine Extension is within upper limits. The airstrip is within the upper limit of the 2014 FEIS as six different scenarios were assessed at that time, the airstrip fits within those scenarios. Agnico Eagle confirms that the 2014 FEIS addresses the worst-case scenario.

Agnico Eagle did not undertake an emissions inventory for the airstrip, as we believe the decreased size of TSF and WRSF, emissions from the airstrip would be minor and wouldn't be significant enough to warrant a remodel. Flight times would be infrequent and not a continuous emitter.

Air quality and noise were included and based on the assessment were not carried forward to the HHERA.

As stated in the Human Health Risk Assessment (Section 10.3.7.1 of the Meliadine Extension FEIS Addendum) potential adverse health effects are characterized. Table 10.3-6 (of the Meliadine Extension FEIS Addendum) provides the classification system. The US EPA moved from classifying substances by categories (US EPA 1986) to classifying using narrative statements (US EPA 2005b). The US EPA provides classifications for substances using either the 1986 guidelines or 2005 guidelines, depending on when the substance was last reviewed.

Interested Party:	**GN**	**Rec No.:**	**GN-TRC-04**
Re:	**Risk Conclusion Rationale**		

Request Made by Interested Party:
The following recommendation regarding this issue is offered:

Provide additional rationale for conclusions of negligible risk (e.g., adjust exposure model inputs to lower uncertainty) or identify if risk controls (administrative or engineered) are required.

Agnico Eagle's Response to Request:
As noted in the Meliadine Extension FEIS Addendum, an application will be submitted to have some waterbodies in the Meliadine Mine area listed in Schedule 2 of the Metal and Diamond Mining Effluent Regulations. Once a waterbody has been included in Schedule 2 it is no longer considered a waterbody.

For the Meliadine Extension, Lake B7 will be fished out and dewatered and then converted to Saline Pond B7. For purposes of the Meliadine Extension FEIS Addendum, B7 was modelled as being reflooded for closure. This was considered an upper bound scenario. As noted in Table 10.3-27 (Meliadine Extension FEIS Addendum), during the post-closure phase, it is unlikely that Pond B7 would be used as a drinking water source because there are more other sources close by (e.g., Meliadine Lake, which has historically been used as a drinking water source). It is possible, but unlikely that B7 (should it be reflooded as a waterbody in post-closure) be used as a drinking water source. Thus, the risk assessment approach, and conclusion of negligible risk is appropriate. Agnico Eagle will assess different closure and mitigation alternatives for SP B7 as part of the Final Closure and Reclamation Plan based on monitoring data and with the objective of meeting water quality objectives.

Interested Party:	**GN**	**Rec No.:**	**GN-TRC-05**
Re:	**Caribou Effects Study Area**		

Request Made by Interested Party:
The GN recommends that the FEIS Addendum's assessment of direct, indirect, and cumulative caribou habitat loss be revised as follows:

That Caribou Effects Study Areas (CESA) be delineated for the calving, post-calving, and summer ranges of the Qamanirjuaq herd using collar data for the period 2012 to the present, using methodology adopted by the Governments of Nunavut and the Northwest Territories (Campbell et al. 2014).

That assessments of direct, indirect, and cumulative habitat losses be provided for each of the CESA's noted above, including revised versions of tables 6.6-5, 6.6-7, 6.6-10 and 6.6-11 of the FEIS Addendum.

Agnico Eagle's Response to Request:
NIRB guidance regarding the process for seeking approval for modifications to previously-approved projects as an amendment (NIRB 2018), Section 3.b states the following:

> *"Where an Environmental Impact Statement (EIS) had been developed for the assessment of the original project, documentation submitted to the NIRB for consideration of a proposed modification should clearly link back to the EIS predictions, identifying any changes to the significance of those predicted impacts, and further referencing new or modified mitigation plans and required changes to the existing monitoring program for the approved project as result of the proposed modification. The justification or rationale for the proposed modification must be described in sufficient detail to be understood and thoroughly assessed."*

Section 6.6.5 of the Meliadine Extension FEIS Addendum clearly links back the predictions of the 2014 FEIS by applying the same methods and spatial boundaries and predictions considered in the 2014 FEIS (Agnico Eagle 2014). Updated management plans including the TEMMP, Windfarm Management Plan, Road Management Plan, which include mitigation and monitoring for wildlife and wildlife habitat were provided with the Meliadine Extension FEIS Addendum. The approach applied was consistent with NIRB guidance and appropriate for the Meliadine Extension FEIS Addendum.

The CESA (post-calving range) was developed and provided by the GN to Agnico Eagle for use in the 2014 FEIS. Agnico Eagle relied on the GN, as the managing regulator, to use appropriate methods to generate the CESA for the 2014 FEIS and the GN reviewed the approach and results of the caribou assessment prior to submission as part of the agreement to use the GN's raw collar data.

Whether use of a smaller CESA changes the effects predictions for the Meliadine Extension FEIS Addendum, will depend on the ratio of disturbed to undisturbed caribou habitat and which development types are captured by the smaller CESA. The result may be no change, an increase, or decrease in predicted cumulative direct and indirect effects. Agnico Eagle disagrees that pre-2012 baseline should be excluded as additional baseline information in previous years describes the estimated post-calving distribution.

Interested Party:	GN	Rec No.:	GN-TRC-06
Re:	Location Of Proposed Infrastructure in Relation to Caribou Trails		

Request Made by Interested Party:
The GN recommends that:

1) The Proponent update the 'heat' map showing collared caribou walk-line densities that was submitted in response to the Kivalliq Inuit Association's Information Request #4. Separate maps should be produced to show walk-line densities during the calving, post-calving, and summer seasons for each of the approved project's phases (preconstruction, construction, and operation).

2) The Proponent provide the documented Inuit Qaujimajatuqangit (IQ) resulting from the IQ investigations that were referenced in section 6.6.5.3 of the FEIS Addendum, but not provided as part of the FEIS Addendum submission.

3) That the Proponent explain what alternatives were considered for the location of the airstrip and windfarm, and provide a summary of all data and information used to select against these alternatives.

Agnico Eagle's Response to Request:
Response 1)
Agnico Eagle does not feel that an updated map is required, as the map presents caribou walk lines.

Response 2)
Inuit Qaujimajatuqangit (IQ) investigations referenced in Section 6.6.5.3 of the Meliadine Extension FEIS Addendum, were provided in Volume 9 of the 2014 FEIS. Volume 9 of the 2014 FEIS is available on the NIRB registry under NIRB file 11MN034. Volume 6, Section 6.6.4.1.1 of the 2014 FEIS provides a summary based on and references Volume 9 for IQ investigations.

The objective of the caribou trail analysis was to establish the presence or absence of trails in the area of the proposed windfarm, and therefore answer the question of whether or not caribou used the area. However, it was noted during the survey that noticeably larger and more well worn trails were present southwest of the proposed windfarm area than the trails in the windfarm area.

Response 3)
A summary of data and information used to select against these alternatives includes the following:

- wind resources – Appendix H-13 of the Meliadine Extension FEIS Addendum
- archaeology sites – site locations are confidential as per the GN policy
- land use – Figure 10.3-2 of the Meliadine Extension FEIS Addendum
- wildlife and vegetation baselines –Appendix IR-1 of the Information Request Response package

Interested Party:	GN	Rec No.:	GN-TRC-07
Re:	Impacts of the All-Weather-Access-Road (AWAR) on Caribou		

Request Made by Interested Party:
The GN recommends that:

1) NIRB clarify whether potential impacts stemming from prolonged use of the AWAR are within the scope of the review of the proposed Project.

2) The Proponent, in consultation with the Terrestrial Advisory Group, revise the 2021 Technical Memorandum entitled "Collared Caribou Meliadine All Weather Access Road Interactions", describing the crossings and deflections of caribou in relation to the All-Weather-Access-Road, as assessed using caribou collar data and shall provide a copy to the NIRB prior to the final public hearing for the proposed Project.

3) In determining dates for the final public hearing, the NIRB take into account the amount of time required to revise the memo (in accordance with Recommendation 2 above).

Agnico Eagle's Response to Request:
Response 1)
Agnico Eagle reiterates that the AWAR is not part of the assessment. As part of the TEMMP, Agnico Eagle closes the road during caribou migration and would continue these practices throughout Meliadine Extension and the effects would remain the same.

Responses 2 and 3)
Further discussion on collard caribou will be discussed with the TAG once a reasonable Data Sharing Agreement is in place between the GN and Agnico Eagle. Future revisions to the Collared Caribou Meliadine All Weather Access Road Interactions technical memorandum would be submitted as part of the Annual Report process.

Interested Party:	GN	Rec No.:	GN-TRC-08
Re:	Implementation of Caribou Protection Measures		

Request Made by Interested Party:
The GN recommends that:

1) The Proponent provide the information requested by the GN in response to its Information Request (GN 2022, GN IR #2) or clarify why this information cannot be provided, taking into account the Approved Project's TEMMP and Project Certificate (Term and Condition 56) requirements for reporting of caribou sighting in terms of date, number of individuals within a group, location, direction of travel, and distance from Project infrastructure that were in effect prior to this Information Request.

2) The Proponent provide copies of all original data sheets for AWAR road surveys conducted by AEM staff, or persons under contract to AEM, involving records of wildlife observation for the period June 1st to July 31st for the years 2018 to 2021.

That the Proponent present evidence, in the form of road survey data and/or incidental wildlife observation logs for the period from June 1 to July 31 for the years 2018 to 2021 demonstrating that each observation of 50 or more caribou during this period was associated with a corresponding mitigation action as prescribed by the Project's Terrestrial Environment Management and Monitoring Plan (TEMMP).

The NIRB, to ensure transparency in the implementation of Caribou Protection Measures, amend Project Certificate No. 006, Term and Condition 56 to require that the Proponent report, in all future Annual Reports: a) all observations of caribou collected during Project-related surveys (by AEM employees or contracted personnel), and b) incidental reports (from AEM employees, contracted personnel or members of the public) in the same format as that of the Proponent's 2021 Annual Report for the Meadowbank/Whale Tail project (AEM 2021) which demonstrates the link between each observation of caribou groups and mitigation actions required under the Project's TEMMP and/or Roads Management Plan.

Agnico Eagle's Response to Request:
Agnico Eagle is of the opinion that the Annual Reports provide transparent details regarding implementation of the TEMMP and caribou protection measures.

In addition, members of the GN (i.e., Daniel Kaludjak and Johanne Coutu) are being copied on caribou migration alert emails which are sent three times per day during caribou migration. These emails present caribou location details based on the latest survey completed by the Meliadine Environmental team and identifies the mitigation protocol stage as outlined in the TEMMP. Thus, the GN is provided with the evidence that caribou protection measures are being implemented.

As the GN knows, additional improvements can be discussed in the TAG.

Interested Party:	**GN**	**Rec No.:**	**GN-TRC-09**
Re:	**Windfarm Effects on Caribou Habitat Use**		

Request Made by Interested Party:
To facilitate review of the proposed Project, the GN recommends the following:

1) That the Proponent develop a Viewshed map showing all areas within a 50 km radius of the proposed and approved Project where the proposed windfarm would theoretically be visible to either humans or caribou, taking into account terrain elevations.

2) That the Proponent commit to provide the recommended Viewshed map to NIRB and intervenors prior to the technical meeting in-order to facilitate the Proponent's suggestion that barren-ground caribou responses to the windfarm development, including Zone-of-Influence (ZOI) predictions, be further discussed at the meeting.

3) That the Proponent commit to consult with the Project's Terrestrial Advisory Group (TAG) and, 3 weeks prior to the deadline for submission of final comments, present a revised version of the FEIS Addendum's assessment of indirect and cumulative indirect caribou habitat loss that:

a. Incorporates alternative estimates for Zone-of-Influence (ZOI) and Disturbance Coefficients (DC) for the windfarm that are consistent with advice provided by the TAG.

b. Incorporates alternative estimates for ZOI for the AWAR as recommended in GN TRC # 11 - Road Effects on Caribou Habitat Use and advice provided by the TAG regarding DCs.

c. Uses a revised Caribou Effects Study Area (CESA) as recommended in GN TRC # 5 – Caribou Effects Study Area.

4) Three weeks prior to the deadline for submission of final comments, the Proponent shall revise, in consultation with the Terrestrial Advisory Group, the Project's Windfarm Management Plan (AEM 2022a, Appendix D36) and the Terrestrial Environment Management and Monitoring Plan (TEMMP) (AEM 2022a, Appendix D34) to outline a phased approach to the windfarm's construction and operation that includes a study of wind turbine effects on caribou that will be completed and reviewed by the NIRB before the full complement of 11 turbines are constructed and operated.

Agnico Eagle's Response to Request:
Responses 1 and 2)
Agnico Eagle feels a 30 km radius for the viewshed analysis meets all requirements.

Response 3)
Agnico Eagle feels our submission is sufficient for the windfarm. The AWAR is not part of the Meliadine Extension assessment, any requests associated with the AWAR should be discussed through the TAG.

Response 4)

As part of the Meliadine Extension Application, Agnico Eagle submitted a new plan, the Windfarm Management Plan, which is a compilation of environmental protection and mitigation measures and management plans from various sources that are intended to address known and anticipated environmental conditions or events that can occur during the windfarm construction and operations. The Windfarm Management Plan will be reviewed with the TAG and updated prior to the construction of the windfarm, if required. During construction and operation, Agnico Eagle would follow the same mitigation and monitoring as outlined in the TEMMP.

Interested Party:	**GN**	**Rec No.:**	**GN-TRC-10**
Re:	**Windfarms Effects on Caribou Movements**		

Request Made by Interested Party:
The GN recommends that:

1) If the Project proceeds, NIRB amend the Project Certificate (NIRB Project Certificate No. 006) to include the requirement for shutdown of the proposed wind turbines between May 15 to July 31, in line with Caribou Protection Measures administered by Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) (Mychasiw 1984; Gunn et al. 2007), until such time that more information is available to determine the effects of wind turbines on caribou and this Project Certificate Term and Condition is reviewed by the NIRB.

2) Three weeks prior to the deadline for submission of final comments, the Proponent revise, in consultation with the Terrestrial Advisory Group, the Project's Windfarm Management Plan

(AEM 2022a, Appendix D36) and the Terrestrial Environment Management and Monitoring Plan (TEMMP) (AEM 2022a, Appendix D34) to outline a phased approach to the windfarm's construction and operation that includes a study of wind turbine effects on caribou that will be completed by the Proponent and reviewed by the NIRB, as per recommendation #1 of this technical comment GN.

Agnico Eagle's Response to Request:
Response 1)
Agnico Eagle does not agree to shutdown the wind turbines.

Response 2)
As part of the Meliadine Extension Application, Agnico Eagle submitted a new plan, the Windfarm Management Plan, which is a compilation of environmental protection and mitigation measures and management plans from various sources that are intended to address known and anticipated environmental conditions or events that can occur during the windfarm construction and operations. The Windfarm Management Plan will be reviewed with the TAG and updated prior to the construction of the windfarm, if required. During construction and operation, Agnico Eagle would follow the same mitigation and monitoring as outlined in the TEMMP.

Interested Party:	**GN**	**Rec No.:**	**GN-TRC-11**
Re:	**Road Effects on Caribou Habitat Use**		

Request Made by Interested Party:
The GN recommends:

1) That the Proponent commit, 3 weeks prior to the deadline for submission of final comments, to revise and present an updated version of the FEIS Addendum's assessment of indirect and cumulative indirect caribou habitat loss that incorporates a Zone-of-Influence (ZOI) for the AWAR of 17 km on the east side and 2.6 km on the west side.

2) That the Proponent commit to consult with the Project's Terrestrial Advisory Group (TAG) and present, 3 weeks prior to the deadline for submission of final comments, a revised version of the FEIS Addendum's assessment of indirect and cumulative indirect caribou habitat loss that incorporates alternative estimates for Disturbance Coefficients for the AWAR that are consistent with advice provided by the TAG.

Agnico Eagle's Response to Request:
Agnico Eagle reiterates that the AWAR is not part of the Meliadine Extension Application and will work with the TAG.

Interested Party:	**GN**	**Rec No.:**	**GN-TRC-12**
Re:	**Female Training/Employment**		

Request Made by Interested Party:
The GN recommends:

1. NIRB add a Term and Condition to Project Certificate 006 for the Proponent to perform an updated study on employment barriers for women and include the possibility of modified employment schedules that could support female employment. Suggested text is provided below:

"The proponent will perform a study (or update the Inuit Workforce Barriers and Strategies Study) on the barriers of employment for Inuit/local women. This may include a trial or study specifically on whether employment schedules can be modified for certain positions or for certain employees."

2. NIRB modify existing Term and Condition 111 (suggested revision in bold):

"In its annual reporting to the NIRB, the Proponent is strongly encouraged to provide detailed descriptions of all employee programs and training including:

a) Descriptions of the goals of each program offered;

b) Language of instruction;

c) Schedules and location(s) of when each program was offered;

d) Uptake by employees and/or family members where relevant, noting Inuit and non-Inuit, ***male and female*** *participation rates; and,*

e) Completion rates for enrolled participants, noting Inuit and non-Inuit, ***male and female*** *rates.*

Agnico Eagle's Response to Request:
Response 1)
IIBA's Employment and Culture Committee (ECC) and Agnico Eagle are continuously working in collaboration with KivIA to address the recommendations from Inuit Workforce Barriers and Strategies Study. The focus is reducing Inuit barriers related to attracting and building the talent pool, recruitment and hiring, engagement and satisfaction, career development, workforce departure, and re-hiring process. This resulted in the launch of the Sanajiksanut program—a new inclusive recruitment approach with better work opportunities available to all. Hence, the Employment and Culture Committee (ECC), Agnico Eagle, and the KivIA will have further discussion to identify critical approaches for increasing women's representation across the talent pipeline.

Response 2)
Agnico Eagle agrees with GN's suggestion to include new gender specific details to Term and Condition 111.

Interested Party:	**GN**	**Rec No.:**	**GN-TRC-13**
Re:	**Economic impact of onsite airstrip**		

Request Made by Interested Party:
The GN recommends that:

1. The Proponent assess whether an impact on local business exists if Agnico builds the onsite airstrip, including whether the original concerns to the 2014 airstrip remain, and how impacts will be mitigated;

or

2. The Proponent discuss how community concerns and opposition have changed since the onsite airstrip was considered and ultimately abandoned in 2014.

Agnico Eagle's Response to Request:
If the airstrip is constructed, an economic evaluation will be submitted prior to the construction of the airstrip.

Interested Party:	**GN**	**Rec No.:**	**GN-TRC-14**
Re:	**Potential for partnerships with Windfarm**		

Request Made by Interested Party:
The GN recommends that:

1. NIRB add a Term and Condition to Project Certificate 006 that encourages the Proponent to pursue the potential for partnerships on the planning, construction, operation of the proposed windfarm. Suggested text is provided below:

"The proponent is encouraged to pursue discussions with local businesses, organizations, and other stakeholders on the possibility of community partnerships that support constructing and operating the proposed windfarm."

2. The Proponent update the Windfarm Management Plan to reflect any partnership, or the opportunity for partnerships, and include any relevant details on the management of the construction and operation of the windfarm through this partnership.

Agnico Eagle's Response to Request:
Response 1)
Agnico Eagle commits to discussions for potential partnerships with the community or other groups; however, does not agree that a Term and Condition is required.

Response 2)
Should a partnership advance, the specifics do not belong in a management plan and Agnico Eagle does not agree that the Windfarm Management Plan needs to be updated.

CROWN-INDIGENOUS RELATIONS AND NORTHERN AFFAIRS CANADA (CIRNAC)

Interested Party:	**CIRNAC**	**Rec No.:**	**CIRNAC-TRC-01**
Re:	**Discovery Waterline**		

Request Made by Interested Party:

CIRNAC recommends that any approvals issued for the Meliadine Extension include terms and conditions requiring that the Discovery waterline be designed, constructed and operated in a fashion that implements the same environmental impact controls as are required for the approved waterline from the Meliadine Mine to Itivia Harbour. At a minimum, those controls shall include:

- *Implementing a leak detection system;*
- *Implementing an emergency response number;*
- *Covering the waterline;*
- *Placing markers along the waterline; and*
- *Testing the waterline prior to each discharge season.*

Agnico Eagle's Response to Request:

Agnico Eagle does not agree that a new Term and Condition is required for the request outlined by CIRNAC. The same mitigation measures were made as a commitment through the waterline process; therefore, Agnico Eagle believes the commitment to implement the same mitigation measures, where applicable, for the Discovery waterline is appropriate.

The Spill Contingency Plan was updated through the Waterline Application to include the committed mitigation measures and will also be applicable to the Discovery waterline. The Spill Contingency Plan can be updated 90 days following issuance of the Project Certificate to include nomenclature of the "Discovery waterline".

Furthermore, Terms and Conditions No. 119, 124, 125, and 134 already include conditions related to the waterline that can be applied to the Discovery waterline.

Interested Party:	**CIRNAC**	**Rec No.:**	**CIRNAC-TRC-02**
Re:	**In-Pit Disposal of Tailings and/or Waste Rock**		

Request Made by Interested Party:
CIRNAC recommends that AEM provide the following information :

a) Detailed descriptions of the in-pit disposal methods, quantities, design parameters, operating practices and limitations;

b) Descriptions of the specific circumstances that would trigger the option to use in-pit disposal;

c) Site-specific technical evaluations of hydrogeological and geochemical conditions associated with in-pit disposal. This should include updated surface and groundwater quality predictions of water in or draining from pits that are used for the disposal of tailings or waste rock;

d) Conceptual closure plans for any pits filled with tailings and waste rock (e.g., water and/or granular covers);

e) Assessments of potential environmental interactions and impacts associated with in-pit disposal. At minimum, interactions and impacts should be assessed quantitatively for surface water quality/quantity and groundwater quality/quantity. Predictions of operational and post-closure pit water quality should also be provided. Where necessary, appropriate mitigations are to be identified and implemented; and

f) Provide evidence that in-pit disposal is an environmentally superior alternative to the currently approved tailings and waste rock disposal practices at the Meliadine Mine site.

Agnico Eagle's Response to Request:
Deposition of tailings and waste rock into pits has been presented as an alternative in the Meliadine Extension FEIS Addendum. It is expected that updates and refinements to selected studies will be discussed and evaluated as part of the Type A Water Licence Amendment with the NWB. Nonetheless, Agnico Eagle wishes to respond to CIRNAC-TRC-02 as follows.

Response a)
As described in Section 2.5.1 of the Meliadine Extension FEIS Addendum, the proposed in-pit disposal method consists of in-pit slurry tailings deposition as an alternative to the dry stacking method currently employed, as well as placing waste rock in mined out (exhausted) pits. The methods and operating practices for in-pit deposition of tailings will be similar to the approved in-pit disposal at the Meadowbank Mine. This alternative will be further evaluated as part of the Water Licence Amendment with the NWB.

Response b)

As described in Section 2.5.1 of the Meliadine Extension FEIS Addendum, the use of in-pit disposal could be used to reduce overall freshwater consumption during closure reflooding within an area that has previously been impacted, and to reduce the surface area impacted by the project by reducing the footprint of the TSF and WRSFs. Specific management actions and mitigation measures to be taken with respect to in-pit disposal will be further evaluated prior to in-pit deposition.

Response c)

It is expected that through the Water Licence Amendment, there will be timing triggers, such as at least 6 months prior to discharge of tailings or waste rock to a mined-out pit. Additional studies (including hydrogeological model update, water balance and water quality model update) shall be submitted to the NWB for review as per the proposed noted timing trigger.

Response d)

As described in Section 2.2 of the Meliadine Extension FEIS Addendum, and as per approved 2014 FEIS, the closure strategy will consist of re-flooding pits. The filling of open pits with water would extend until the end of the closure phase. Local runoff and precipitation will be stored in the pits to enhance reflooding activities. Active reflooding will be conducted with water to be pumped from Meliadine Lake. There will be no discharge into Meliadine Lake or to Itivia Harbour during this phase. Post-closure will be initiated when flooded pits are reconnected to the surrounding environment. For additional details regarding closure and post-closure, please refer to the Conceptual Closure and Reclamation Plan (Appendix D-18).

In the case that in-pit deposition alternative is adapted for the Meliadine Extension, the Interim Closure and Reclamation Plan will be updated and submitted to the NWB for review as per response c).

Response e)

In-pit deposition is an alternative that will be utilized in an existing disturbed area, which would be in an exhausted open pit. The footprints of these open pits have already been assessed and approved for disturbance. If in-pit deposition moves forward, the additional studies outlined in Response c) above will be provided to the NWB for review.

Response f)

Agnico Eagle wishes to refer to the comment received from NRCan on NRCan-IR-3, which states:

“NRCan encourage the use of exhausted open pits for the management of tailings and waste rock that could be sources of ARD/ML. Such practice reduce reliance on surface facility maintenance such as dam stability over the long term, which eliminates risk of dam failure”.

Agnico Eagle agrees with this statement and also wishes to state that the use of in-pit disposal could be used as an alternative within an area that has previously been impacted.

Interested Party:	**CIRNAC**	**Rec No.:**	**CIRNAC-TRC-03**
Re:	**Temporary Storage of Saline and Surface Contact Water in Pits**		

Request Made by Interested Party:
CIRNAC recommends that AEM provide comprehensive responses to each of the following:

a) Describe the approaches that will be used to store contact water in pits including general design parameters, operating practices and limitations (e.g., volumes stored, storage duration, any required treatment, eventual discharge to the environment);

b) Describe the specific circumstances that would trigger the option to store contact water in pits;

c) Describe the evaluations that would be done prior to regulatory approval of in-pit storage of contact water (e.g., updated site-specific hydrogeological and geochemical modelling);

d) Provide an assessment of potential environmental interactions and impacts associated with storing contact water in pits. At minimum, interactions and impacts should be assessed quantitatively for surface water quality/quantity and groundwater quality/quantity; and

e) Provide evidence that contact water storage in mined-out pits is an environmentally superior alternative when compared to the currently approved water management practices.

Agnico Eagle's Response to Request:
The alternative to store saline and contact water into pits is already part of the short-term strategy that is being implemented by Agnico Eagle at the Meliadine Mine. As per Section 3.3.2.1 of the approved Groundwater Management Plan Version 6 (January 2021), submitted in compliance with Commitment #5 from Technical Meeting held on November 30, 2020 for Amendment Application to the Water Licence No: 2AM-MEL1631, the mine plan as it relates to open pits will continue to be considered as an adaptive management strategy.

Nonetheless, Agnico Eagle wishes to respond to CIRNAC-TRC-03 as follows.

Response a)
The approach to be used to temporarily store contact water in pits will be described in the Water Management Plan and Groundwater Management Plan, building on lessons learned from storing saline water in TIR02.

Response b)
Tables 1 and 2 of the Adaptive Management Plan (Appendix D-1 of the Application) present the operation condition and adaptive management response for temporary storage of contact water in open pits and/or saline ponds.

Response c)

Prior to commencement of storing water within a pit, Agnico Eagle would submit an operational update to the NWB.

Response d)

The existing monitoring at site will be applied to this activity of temporarily storing saline water.

Response e)

This is an alternative to store water for a temporary period of time to allow flexibility to the operations and utilizes an area that has previously been impacted, reducing the surface area impacted by the project.

Interested Party:	CIRNAC	Rec No.:	CIRNAC-TRC-04
Re:	Minimizing Discharges to Meliadine Lake		

Request Made by Interested Party:
CIRNAC recommends that AEM[1]:

a) Confirm the maximum discharge volumes to Meliadine Lake, as presented in the Waterline FEIS and the Meliadine Extension FEIS;

b) Present the rationale for any differences in the volumes reported under a); and

c) Indicate what steps will be taken to fulfill the commitment to minimize or eliminate discharges to Meliadine Lake (e.g., ongoing grouting to limit saline water inflows to the mine).

Note 1 = The same recommendations were included in CIRNAC-IR-6. AEM's response to the IR did not provide sufficient information for CIRNAC to evaluate the incremental environmental impacts associated with the Meliadine Extension. As a result, the recommendations are repeated in the current TRC. If there is uncertainty regarding the intent of the recommendations, AEM is encouraged to contact CIRNAC for clarification.

Agnico Eagle's Response to Request:
Responses a and b)
Agnico Eagle confirms the numbers presented are correct and differ due to the relative footprints of the Waterline and Meliadine Extension Project Descriptions. The 2014 FEIS includes the full Meliadine Extension. However, consistent with the response to CIRNAC-IR-6, Agnico Eagle would like to reiterate that the predicted discharges to Meliadine Lake for Meliadine Extension are within the limits of the 2014 FEIS (2.7 Mm^3 annual average) and represent an upper limit model iteration for the purposes of the Environmental Impact Assessment.

Response c)
Agnico Eagle will comply with Term and Condition 25a of Project Certificate No.006 and will follow the Adaptive Management Plan. Further discussions will occur through the Water Licence Amendment process.

Interested Party:	CIRNAC	Rec No.:	CIRNAC-TRC-05
Re:	Total Dissolved Solids (TDS) Concentrations in CP1		

Request Made by Interested Party:
CIRNAC requests that AEM:

a) Present a detailed, quantitative description of the factors that resulted in predicted TDS concentrations in CP1 reducing by more than 70% under the proposed Meliadine Extension.[2]

Note 2 = Consistent with NIRB's direction to AEM (September 9, 2022), AEM's response to CIRNAC-IR-7 committed to addressing this information requirement during the Technical Review phase of the current EA.

Agnico Eagle's Response to Request:
TDS concentrations forecasted in the 2021 Annual Report Water Balance and Water Quality Model (WBWQM) are greater than those forecasted in the Meliadine Extension WBWQM due to the sizes of the footprints and corresponding TDS source terms within each. The Meliadine Extension mine plan is expanded to incorporate all deposits approved through the 2014 FEIS, whereas the current operation includes only the Tiriganiaq deposit. Importantly, the increased footprint is characterized by a lower magnitude of TDS loading per unit area relative to the existing operation. This is due to a combination of a greater percentage of natural (i.e., undisturbed) land cover in the Meliadine Extension footprint and segregation of "salt rock" in the Meliadine Extension waste rock management strategy. Collectively, the result is lower TDS loading per unit area of surface contact water reporting to CP1 in the Meliadine Extension WBWQM relative to the existing operation.

The concept above can be quantified when considering the impact of CP B4 on the CP1 TDS trends in the Meliadine Extension WBWQM. This consideration is most appropriate as all surface contact water from Extension infrastructure is directed to CP1 through CP B4; keeping in mind that this input to CP1 does not occur in the current operation and associated WBWQM. On average between 2026 (after CP B4 dewatering) and 2043 (end of mine life), CP B4 is forecasted to contribute 69% of the total volume input to CP1. As reported in Appendix H-07 of the Meliadine Extension FEIS Addendum, the average TDS concentration in CP B4 over the operations phase is forecasted to be 312 mg/L. This large volume of relatively dilute water reporting to CP1 in the Meliadine Extension WBWQM, which is not present in existing operation, explains the lower concentrations modelled in CP1 in the Meliadine Extension WBWQM.

Note that in both WBWQM iterations, CP1 collects surface contact water generated by the WRSFs, open pit walls, and other disturbed areas that are not related to underground mining operations. As such, the differences in TDS predictions at CP1 are not related to saline water management, but rather reflect the change in mine layout between existing and planned operations for Meliadine Extension.

Interested Party:	**CIRNAC**	**Rec No.:**	**CIRNAC-TRC-06**
Re:	**Post-Closure Arsenic Loadings from SP B7 to Tiri Pit Lake**		

Request Made by Interested Party:
CIRNAC recommends that AEM:

a) Extend the duration of water quality modelling until results demonstrate that maximum concentrations within surface water receivers have been achieved;

b) Indicate the spatial extent of areas within the Tiri Pit Lake and other surface water receivers that are predicted to exceed any AEMP criteria during post-closure;

c) Indicate the approximate accuracy of the water quality modelling presented in the FEIS Addendum. If the accuracy is better than the "order of magnitude" estimates presented by AEM in other assessments, please describe how the accuracy was improved; and

d) Describe the sensitivity analyses that have been performed to confirm that post-closure arsenic concentrations in the Tiri Pit Lake and other water bodies will not be substantively greater than predicted.

Note 3 = Similar recommendations were presented in CIRNAC-IR-8 and CIRNAC-IR-9. AEM provided incomplete responses to those recommendations and/or indicated that the recommendations should be addressed during the Type A Water Licence Amendment process with the NWB. However, given that the FEIS Addendum presents water quality predictions that are substantively different from those presented in earlier Environmental Assessments, CIRNAC is of the opinion that they should be considered in the current EA process. In addition, CIRNAC notes that NIRB's letter to AEM (September 9, 2022) stated that the topics should be addressed during the NIRB Technical Review process

Agnico Eagle's Response to Request:
Response a)
Agnico Eagle disagrees with the recommendation of extending the duration of water quality model in Tiri Pit Lake. The predictions extend to 100 years post-closure and are below the SSWQO for arsenic. The site water quality in the pits will be monitored and reported to the NWB, as per Item 14, Part E of the Water Licence: "*The Licensee shall, on an annual basis during Closure, compare the predicted Water quantity and quality within the pits to the actual measured Water quantity and quality. Should the difference between the predicted and measured values be 20% or greater, then the cause(s) of such difference(s) shall be identified, and the implications of the differences shall be assessed and reported to the Board".*

Response b)
An ecological risk assessment was completed and concluded that the potential for effects to aquatic health to occur is unlikely.

Response c)

The Meliadine Extension WBWQM has the advantage of being supported by several years of site monitoring data which were unavailable when the 2014 FEIS was completed. This monitoring data was used to calibrate and validate model predictions, leading to a relatively high degree of confidence in the model inputs. For this reason, the Meliadine Extension model results are expected to be more accurate than the 2014 FEIS results, which were expected to be accurate to an 'order of magnitude' as per the professional judgement of the report authors.

Response d)

The predictions show that the maximum concentrations at this location (0.013 mg/L) does not approach the AEMP guideline (0.025 mg/L), making it unlikely that a sensitivity would result in an exceedance. An ecological risk assessment was completed and concluded that the potential for effects to aquatic health to occur is unlikely.

Interested Party:	CIRNAC	Rec No.:	CIRNAC-TRC-07
Re:	Post-Closure Seepage Quality from Reclaimed Areas		

Request Made by Interested Party:
CIRNAC recommends that AEM:

a) Provide evidence from other mine sites that seepage from reclaimed areas will revert to background water quality at closure.

b) In the absence of such evidence, an appropriate source-term should be developed for reclaimed areas of the site and water quality models should be updated.

Note 4 = In response to the same recommendation in CIRNAC-IR-10, AEM stated that the topic should be discussed during the Water Licence Amendment process with NWB. However, given that the FEIS Addendum presents water quality predictions that are substantively different from those presented in earlier Environmental Assessments, CIRNAC is of the opinion that they should be considered in the current EA process. In addition, CIRNAC notes that NIRB's letter to AEM (September 9, 2022) stated that the topic should be addressed during the NIRB Technical Review process.

Agnico Eagle's Response to Request:
Responses a and b)

For Meliadine Mine site the source terms of mine facilities areas, ore pads, and disturbed areas were assigned chemistry observed from monitoring data and were validated through the calibration exercise of the model. Mine closure and reclamation activities are described in the Interim Closure and Reclamation Plan (ICRP - 2AM-MEL1631 Amendment Appendix G-ICRP Update 2020). As described in the ICRP, at closure, all buildings and structures will be decontaminated and dismantled and NML cover material will be placed where required for erosion and dust control. As described in the Conceptual Closure and Reclamation Plan for Meliadine Extension FEIS Addendum (Appendix D-18), the TSF and Discovery WRSF will be progressively reclaimed during operations with NPAG/NML waste rock, and saline waste rock will be backfilled to the underground mines. Extensive geochemical characterization programs have been completed and monitoring is still occurring to support water quality predictions for Meliadine Extension. The predictions show that the parameters for mine facilities analyzed are below guidelines during the post-closure phase.

Agnico Eagle disagrees that a new source-term should be developed for disturbed areas.

ENVIRONMENT AND CLIMATE CHANGE CANADA (ECCC)

Interested Party:	**ECCC**	**Rec No.:**	**ECCC-TRC-01**
Re:	**Identification of pathways**		

Request Made by Interested Party:
ECCC recommends the Proponent consider the proposed airstrip as a new primary pathway for the Project.

Agnico Eagle's Response to Request:
Agnico Eagle does not agree that the airstrip needs to be considered as a primary pathway, as emissions from the airstrip would be minor due to the infrequent and non-continuous emissions associated with an airstrip. Emissions associated with the airstrip are estimated to be 4 to 6 flights per week and the operating time of an airplane is a very short duration of time.

Interested Party:	**ECCC**	**Rec No.:**	**ECCC-TRC-02**
Re:	**Emission standards for proposed equipment purchases**		

Request Made by Interested Party:
ECCC recommends the Proponent consider purchasing equipment that meets Tier 4 emission standards.

Agnico Eagle's Response to Request:
Agnico Eagle will consider purchasing equipment with Tier 4 emission standards.

Interested Party:	**ECCC**	**Rec No.:**	**ECCC-TRC-03**
Re:	**Redistribution of fugitive emissions**		

Request Made by Interested Party:
ECCC recommends the Proponent perform particulate matter modelling to facilitate assessment across several locations to determine if the Project will contribute to a net increase in fugitive emissions.

Agnico Eagle's Response to Request:
Agnico Eagle does not agree that modelling is needed for particulate matter. Agnico Eagle reiterates the conclusions made in Section 5.2.4 of the Meliadine Extension FEIS Addendum as the predictions of the 2014 FEIS were conservative, and Meliadine Extension is within upper limits. Agnico Eagle confirms that the 2014 FEIS addresses the worst-case scenario and fully captures the Meliadine Extension updates.

Based on the expected small changes in PM emissions between the 2014 FEIS and the Meliadine Extension FEIS Addendum, the conservative nature of the original modelling, and the inherent uncertainty in modelling fugitive dust, Agnico Eagle is of the opinion there is little value in additional PM modelling. A robust air quality management and monitoring program, which is already in place for Meliadine Mine, will be sufficient to measure and mitigate any effects of air emissions from the Meliadine Extension.

Interested Party:	**ECCC**	**Rec No.:**	**ECCC-TRC-04**
Re:	**CAAQS online link in reference section is now out of date.**		

Request Made by Interested Party:
ECCC requests the Proponent update the reference with the current link: https://ccme.ca/en/air-quality-report.

Agnico Eagle's Response to Request:
Agnico Eagle thanks ECCC for raising this error and will verify correct links for future references.

Interested Party:	ECCC	Rec No.:	ECCC-TRC-05
Re:	Effects of Meliadine Extension on Climate Change		

Request Made by Interested Party:

ECCC recommends the following information be provided in consultation with the Draft Technical Guide Related to the Strategic Assessment of Climate Change: Guidance on quantification of net GHG emissions, impact on carbon sinks, mitigation measures, net-zero plan and upstream GHG assessment ("the draft Technical Guide"):

GHG emission estimate:

1. ECCC recommends the Proponent follow the guidance in the Strategic Assessment of Climate Change and the draft Technical Guide to estimate direct and indirect greenhouse gas emissions associated with all phases of the Project, including the construction phase and decommissioning phase (closure/post-closure), similar to Table ECCC-4-2 of the September 26, 2022 IR Responses.

Mitigation measures and net-zero plan:

2. ECCC recommends that the Proponent review and incorporate the guidance for mitigation measure principles and the BAT/BEP determination process in Section 3 of the draft Technical Guide.

3. ECCC recommends that the Proponent develop a net-zero plan for the Project according to section 3.5 of the draft Technical Guide.

Carbon sinks:

4. If the Project is anticipated to impact carbon sinks, ECCC recommends the Proponent performs an assessment of the Project's impact on carbon sinks. Guidance for a carbon sink impact assessment can be found in section 4 of the draft Technical Guide.

Agnico Eagle's Response to Request:

As part of the Meliadine Extension FEIS Addendum, Agnico Eagle provided GHG calculations for the worst-case scenario and which includes construction and operation activities. There is no defined construction phase for Meliadine Extension as construction activities will be staggered as the different deposits are turned on in the mine plan. GHG calculations were made using the ECCC Technical Guidance on Reporting Greenhouse Gas Emissions (ECCC 2020).

As per the Meliadine Extension Project Description, the closure phase will end in 2050 and the post-closure phase will occur from 2051 to 2060. Anticipated activities in 2050 are completion of pit flooding and monitoring. Activities to be conducted during the post-closure phase is water quality monitoring every few years for a short period of time each time. Overall, these activities are very minimal in intensity.

Reference:

ECCC (Environment and Climate Change Canada). 2020. Reporting greenhouse gas emissions data: technical guidance 2020. Available at: Reporting greenhouse gas emissions data: technical guidance 2020 - Canada.ca

Interested Party:	**ECCC**	**Rec No.:**	**ECCC-TRC-06**
Re:	**Air Quality and GHG**		

Request Made by Interested Party:

ECCC requests that the Proponent includes individual vehicles and engine descriptions [engines type, engine make/model, model year, power rating, emission rating (Tier3, Tier4, etc.), fuel type, etc.], as well as any underlying assumptions in regard to activity data (hours per day), the emissions factors referenced for the emissions estimates, and provide the methods along with the sample calculations used for the emissions estimates.

Agnico Eagle's Response to Request:

Agnico Eagle refers the reader to Appendix TC-1 of this response package which includes a spreadsheet of the information requested and used for the air quality modelling emission inventory. Additional details are as follows:

- **Engine type:** All engines were assumed to be internal combustion reciprocating engines but is not stated in the spreadsheet
- **Engine make/model:** Listed for each unit in the spreadsheet
- **Model year:** Assumed to be 2020 for all units, except as stated in notes in the spreadsheet
- **Power rating:** Listed for each unit in the spreadsheet
- **Emission rating (e.g., Tier3, Tier4):** Not listed in the spreadsheet because it is not an input parameter for the MOVES emission model. The model makes an assumption for this based on the engine's stated year of manufacture
- **Fuel type:** All engines were assumed to run on diesel, as stated in the spreadsheet
- **Underlying assumptions (i.e., activity data, hours per day)**: Lists operating hours per year for each Nonroad unit, and km travelled per year for each Onroad unit (because MOVES outputs emission factors in g/hp-hr and g/km for those types, respectively). Additional assumptions (e.g., how were the km/year values calculated) are included for applicable units in notes in the relevant cells
- **Emission factors used for emission estimates**: Emission factors that we used for each unit are listed in the spreadsheet; they were copied from MOVES output files
- **Sample calculations for emission estimates:** Emission calculations for each unit are included in the spreadsheet (e.g., for a given unit, NOx emissions in g/yr are included as an equation, not simply saved as a value)

Interested Party:	ECCC	Rec No.:	ECCC-TRC-07
Re:	Assessment of waste rock and tailings in-pit disposal		

Request Made by Interested Party:

ECCC recommends that a full assessment of the proposed in-pit disposal be done, with the information identified above provided.

Agnico Eagle's Response to Request:

Deposition of tailings and waste rock into pits has been presented as an alternative in the Meliadine Extension FEIS Addendum. It is expected that updates and refinements to selected studies will be discussed and evaluated as part of the Type A Water Licence Amendment with the NWB. For additional information, refer to response to CIRNAC-TRC-02.

Interested Party:	**ECCC**	**Rec No.:**	**ECCC-TRC-08**
Re:	**Groundwater Monitoring**		

Request Made by Interested Party:

ECCC recommends that additional groundwater monitoring be implemented in support of the assessment of impacts associated with in-pit disposal of mine wastes. An understanding of the movement of water (source vs sink) between pits and deep groundwater is needed, along with confirmation that groundwater down-gradient of the pits has been adequately characterized to detect changes. A monitoring program to detect contaminant migration from in-pit disposal into groundwater should be provided as part of the mitigation measures for consideration of in-pit disposal.

Agnico Eagle's Response to Request:

Deposition of tailings and waste rock into pits has been presented as an alternative in the Meliadine Extension FEIS Addendum. In the case that in-pit deposition alternative is adapted for the Meliadine Extension, the Groundwater Management Plan (which includes the groundwater monitoring program) and the Adaptive Management Plan will be updated and submitted to the NWB prior to deposition.

Interested Party:	ECCC	Rec No.:	ECCC-TRC-09
Re:	Lake B7/Saline Pond B7 at Closure		

Request Made by Interested Party:
ECCC recommends that clarification be provided regarding:

- *The final configuration of B7 at closure, including inflows and outflows;*
- *Identification of contaminant inputs to B7 during post-closure, i.e. will seepage from the WRSF1 report to B7;*
- *How B7 residual salinity in the lake sediments will be attenuated; and*
- *What the proposed mitigation measures will be for arsenic in B7 during the post-closure stage.*

Agnico Eagle's Response to Request:
Agnico Eagle refers ECCC to Section 3.8, Appendix H-7 of Meliadine Extension FEIS Addendum which describes the water management assumptions of SP B7 for closure and post-closure. Post-closure flow paths for SP B7 are presented in Section 3.9 of the same appendix. Water quality predictions at SP B7 are described in Section 6.2.2 of Appendix H-7.

At closure, all remaining saline water is pumped from SP B7 to the underground void spaces from 2043 onwards. SP B7 is actively refilled by pumping water from Meliadine Lake during the open water season of 2044. Afterwards, SP B7 is allowed to fill with runoff from the surrounding catchments, including small volumes of contact water from the TSF and WRSF1.

Agnico Eagle would like to reiterate that SP B7 will be listed under Schedule 2.

Agnico Eagle will monitor water quality predictions at SP B7 during operations and during the closure phase until water quality meets discharge criteria. Agnico Eagle will assess different closure and mitigation alternatives for SP B7 as part of the Final Closure and Reclamation Plan based on monitoring data and with the objective of meeting water quality objectives for a Schedule 2 lake. These options may include passive physical barriers to prevent fish access.

Interested Party:	**ECCC**	**Rec No.:**	**ECCC-TRC-10**
Re:	**Climate change**		

Request Made by Interested Party:

ECCC recommends that the Proponent consider assessing an ensemble of climate projections from a range of future emission scenarios (low to high forcing) and models in their evaluation of potential climate change effects on relevant aspects of the proposed project.

Agnico Eagle's Response to Request:

Agnico Eagle does not agree that additional future emission scenarios (low to high forcing) should be conducted for the Meliadine Extension FEIS Addendum. As discussed in the response to ECCC-IR-8, RCP4.5 was approved for use in design of infrastructure for the existing Water Licence of Meliadine Mine (the reader is referred to the Tailings Storage Facility (TSF) Design Report and Drawings, submitted as part of Water Licence 2AM-MEL1631, Part D, Item 1 [Agnico Eagle 2018]). As such, climate predictions under RCP4.5 continued to be used for the modelling and design completed in support of the Meliadine Extension FEIS Addendum. Agnico Eagle will continue to use monitoring data during operations and closure to calibrate model prediction results per Part E, Item 14 of the Water Licence.

Interested Party:	ECCC	Rec No.:	ECCC-TRC-11
Re:	Migratory Bird Pathways of Effects – Proposed Airstrip Local Study Area (LSA) – Windfarm and Airstrip Bird Baseline		

Request Made by Interested Party:
ECCC recommends that:

- *Additional bird baseline surveys be conducted that encompass the full footprint of the windfarm;*
- *Additional bird baseline surveys be conducted during the spring and fall migration period;*
- *The Proponent provides clarification on what monitoring programs will be completed, in addition to mortality surveys, during the operation of the windfarm and airstrip. In addition to the monitoring planned during the breeding season, monitoring, including mortality surveys, should take place during the spring and fall migration periods; and*
- *If the airstrip is implemented, the TEMMP, the Windfarm Management Plan, and the Airstrip Management Plan be updated to incorporate additional survey and monitoring efforts to assess any cumulative impacts to birds. These updates should be provided for further review.*

ECCC would welcome the opportunity to engage with the Proponent directly on the proposed baseline and monitoring survey designs for the windfarm and airstrip.

Agnico Eagle's Response to Request:
Agnico Eagle agrees to conduct one more year of bird surveys prior to construction of the windfarm.

Agnico Eagle confirms that only mortality surveys will be completed during the operation of the windfarm.

If and when the airstrip is built, Agnico Eagle will evaluate if the Airstrip Management Plan requires an update.

Interested Party:	**ECCC**	**Rec No.:**	**ECCC-TRC-12**
Re:	**Meteorological Data**		

Request Made by Interested Party:
ECCC recommends that the Proponent include a "weather" or "visibility" aspect when conducting migratory bird surveys, and that migratory bird surveys be conducted in various weather conditions (i.e. not only in favourable conditions).

Agnico Eagle's Response to Request:
Surveys are conducted using subject matter experts over a period of time. If unfavorable conditions are encountered during a field campaign, this will be recorded which would include weather and visibility.

Interested Party:	**ECCC**	**Rec No.:**	**ECCC-TRC-13**
Re:	**Species at Risk**		

Request Made by Interested Party:

ECCC recommends the Proponent ensure that they have identified and assessed adverse effects of the Project on SARA listed and COSEWIC assessed species at risk likely to be affected by the Project and ensure that measures are taken to avoid or lessen those adverse effects and monitor them to inform adaptive management.

If the Proponent encounters species at risk, the primary mitigation measure should be avoidance.

Mitigation and monitoring measures should be consistent with applicable species at risk Recovery Strategies and Action Plans or Management Plans.

Agnico Eagle's Response to Request:

Agnico Eagle will continue to review updates to the *SARA* and COSEWIC listings.

FISHERIES AND OCEANS CANADA (DFO)

Interested Party:	DFO	Rec No.:	DFO-TRC-01
Re:	Effects of FEIS Addendum - Scope		

Request Made by Interested Party:
With respect to the disposition of this issue, DFO recommends the Proponent:

1. Address all potential impacts to fish and fish habitat , including those within the footprint of the 2014 FEIS through the NIRB Reconsideration process for transparency and to avoid additional time during the regulatory/ Fisheries Act Authorization process.

a. Identify where the 2014 plan differs from the newly proposed project and where adaptive management approaches have been or may be taken in the Meliadine Extension that differ from Management Plans that were developed in 2014, and where new information discovered in the Aquatic Effects Monitoring Program and additional sampling events is reflected in modified operations.

Agnico Eagle's Response to Request:
Response 1)
Potential effects to fish and fish habitat were assessed as described in Section 7.5 of the 2014 FEIS and in Section 7.5 of the Meliadine Extension FEIS Addendum. This assessment was conducted for the study areas as described in Section 7.1.3 (page 221 of the Meliadine Extension FEIS Addendum). The study area boundaries for the Meliadine Extension were developed based on the same criteria as the 2014 FEIS (Agnico Eagle 2014). These areas are described as follows:

- The LSA is the area where there exists the potential for measurable impacts due to Meliadine Extension activities.
    - Watersheds that contain a proposed component of mine infrastructure (e.g., pits, WRSF) (Figure 7.1-3) and watercourses along the AWAR.
    - Waterbodies and watercourses that contain a proposed component of mine infrastructure (e.g., pits, WRSF) (Figure 7.1-4) and watercourses along the AWAR.
- The RSA is the area within which there exists the potential for residual effects, including direct and indirect effects, as well as incremental effects from the Meliadine Extension and cumulative effects from historical, existing, and RFFDs, including the Meliadine Extension.
    - Regional watersheds of the mine site and roads (Figure 7.1-5).
- The temporal boundary is defined as the amount of time between the start and end of a relevant Meliadine Extension activity or stressors (which are related to development phases), plus the duration required for the effect to be reversed (NIRB 2012a).

Response 1a)
The Meliadine Extension FEIS Addendum described and illustrated the similarities and differences between the 2014 FEIS and the Extension. In particular Figure 1.1-3 (page 5 of the Meliadine Extension FEIS Addendum) presents the Meliadine footprint assessed in 2014 (and the basis of Project Certificate

No.006) and the new components of Meliadine Extension. Section 1.1 (page 3 of the Meliadine Extension FEIS Addendum) identifies the new activities requested to be included in Project Certificate No.006. Appendix B-2 also provides adaptive management and mitigations to manage potential effect and have been updated based on learnings since the 2014 FEIS.

Adaptive management is reflected in the various revisions to management plans. These plans are regularly updated and submitted with the annual report; in addition, all management plans were updated and provided with the Meliadine Extension FEIS Addendum (Appendix D). For example, the document control table in the Water Management Plan (Appendix D-35 of the Meliadine Extension FEIS Addendum) outlines the revisions that have occurred in this document over time such as new infrastructure, updates to tables, and updates to monitoring.

Interested Party:	DFO	Rec No.:	DFO-TRC-02
Re:	Baseline Assessment		

Request Made by Interested Party:
With respect to the disposition of this issue, DFO recommends the Proponent:

1. Provide additional baseline information on fish use and habitat, as well as revised impact assessments based on the increased duration of the project are required for DFO to conduct a thorough review of the potential impacts and determine what Harmful Alteration, Disruption, or Destruction of Fish Habitat is likely to occur.

Agnico Eagle's Response to Request:
The Meliadine Extension is largely within the footprint of the 2014 FEIS. The refinements of the Meliadine Extension are within the previously assessed area.

Agnico Eagle completed extensive studies between 1997 and 2012 to understand the connectivity of the various watersheds, fish communities and fish habitat within the watersheds and waterbodies, as well as downstream impacts to those watersheds. Additional studies were completed between 2020 and 2021 to validate the historical information and gather additional information to satisfy new requirements of the *Fisheries Act*, specifically include consideration for streams, intermittently connected waterbodies, and seasonally inundated features.

For purposes of the Meliadine Extension FEIS Addendum, adequate information to support the baseline, validate existing conditions, and assess potential impacts to the fish community has been provided. Agnico Eagle has also conducted additional fish and fish habitat monitoring through the Aquatic Effects Monitoring Program (Golder 2017, 2018, 2019; Azimuth 2022). Agnico Eagle will continue to work with the DFO through the parallel regulatory process to obtain a *Fisheries Act* Authorization.

Quantification of impacts were provided in the Conceptual Offsetting Plan (Appendix D-26 of the Meliadine Extension FEIS Addendum) and will be included in the Final Fish Habitat Offsetting Plan that will be submitted with the Type A Water Licence Amendment to the NWB.

References:
Azimuth. 2022. Aquatic Effects Monitoring Program – 2021 Annual Report. Prepared for Agnico Eagle Mines Limited. April 2022

Golder. 2017. Aquatic Effects Monitoring Program – 2016 Annual Report. Prepared for Agnico Eagle Mines Limited. March 2017.

Golder. 2018. Aquatic Effects Monitoring Program – 2017 Annual Report. Prepared for Agnico Eagle Mines Limited. March 2018.

Golder. 2019. Cycle 1 Environmental Effects Monitoring Report and 2018 Aquatic Effects Monitoring Program Annual Report, Meliadine Gold. Prepared for Agnico Eagle Mines Limited. March 2019.

Interested Party:	DFO	Rec No.:	DFO-TRC-03
Re:	Hydrology		

Request Made by Interested Party:
With respect to the disposition of this issue, DFO recommends the Proponent:

1. Describe how AEM has calculated the impact from changes in flow from diversions and reduced upstream drainage area on the seasonal streams and the diffuse channel habitats between lakes and the potential impacts on fish and fish habitat?

2. (FEIS Addendum Sect 7.3 pg 245) Although AEM indicates that the magnitude of the effect is not predicted to change between the 2014 assessment and the 2022 addendum, there are identified changes in the impact to drainage area size, changes to berms, and an increase in the duration of the project.

a. Discuss how the change in the contributing watershed area will impact downstream ponds and lakes and change where/when water enters Meliadine Lake (e.g. Watersheds A, B, I, J, CH, W, and X).

i. Changes in overall annual discharge are not reflective of all the potential impacts to the aquatic ecosystem. Please describe the changes of flow in relation to monthly and seasonal discharge and relate those changes to potential effects on fish movement in and out of the watersheds, as well as temporal changes in ice-development, flow peaks, and dry periods.

b. Discuss how these changes, per basin, in water contribution to Meliadine Lake will result in changes to nutrient input, changes to temperature, and changes to small-bodies fish production in areas of Meliadine Lake.

i. Will changes to the water diversion point/flow path, drainage area, and point of entry into Meliadine Lake result in changes to local aquatic ecology at the location in Meliadine Lake? Please discuss these flow changes in terms of fish use, including small-bodied fish use of seasonally inundated areas.

3. The 2014 FEIS assessed the water balance in the A Watershed in Section 7.3, primarily reporting on changes to lake water levels and the outlet to Meliadine.

a. What will the change of quantity of flow/mean monthly discharge/daily discharge be at each waterbody in the A Watershed from the infilling of lakes/ponds and diversion of water to contact ponds and how many additional seasons will these drainages be changed?

4. Can AEM describe if water from the Lake B45 Sub-Watershed still to be diverted through Pond P3, into Pond P2 (now identified as B41) into B2? If not, how will that change flows into and out of Lake B2?

5. With the change in pit size, waste rock storage area, and watershed drainage direction/area from the 2014 FEIS to the FEIS addendum proposal, what will be the overall change in available fish habitat on the site at post-closure. Please describe it in terms of area (pond/lake size & stream length) over time.

Agnico Eagle's Response to Request:

Response 1)

The proposed work is within the mine footprint identified in the 2014 FEIS. The Meliadine Extension contains refinements to the plan, largely within the 2014 footprint, that takes into account optimization of operational activities since the 2014 FEIS.

The accounting of fish and fish habitat losses for streams, intermittently connected waterbodies, and seasonally inundated areas will be included in the Final Fish Habitat Offsetting Plan that will be submitted with the Type A Water Licence Amendment to the NWB.

Response 2)

The Meliadine Extension is largely within the footprint of the 2014 FEIS. The refinements of the Meliadine Extension are within the previously assessed area. Agnico Eagle will work with DFO to quantify and address these localized impacts.

Response 3)

As described in the Meliadine Extension FEIS Addendum (Section 7.3.3), the total flows diverted from sub-watershed A were calculated to be 1,670,000 m^3/yr in contrast to total flows in Meliadine Lake were calculated to be 91,700,000 m^3/yr. As concluded in the Meliadine Extension FEIS Addendum dewatering of the A watershed would have negligible influence on Meliadine Lake and the outlet. As described in the Project Description, there will be an additional 11 years of operations.

Response 4)

At closure, flows into and out of B2 will be reverted back to baseline.

Response 5)

The Conceptual Offsetting Plan provided the change in available fish habitat on the site at post-closure will be update for the Final Fish Habitat Offsetting Plan.

Interested Party:	DFO	Rec No.:	DFO-TRC-04
Re:	Fish and Fish Habitat		

Request Made by Interested Party:
With respect to the disposition of this issue, DFO recommends the Proponent:

1. Lake A6, was not initially proposed to be completely dewatered, but the changes in the extension include the complete loss of Lake A6 and all water contribution to the A sub-watersheds from above Lake A1.

a. Describe the differences between the partial dewatering and the complete dewatering of Lake A6 and the impact to fish populations in Lake A6 and impacts of a fish-out?

b. Describe the physical and ecological differences between A6 being partially dewatered (lowered by 1.5m from baseline in 2014 FEIS) and completely dewatered (FEIS Addendum); Include a description on the loss of resident aquatic organisms, changes to physical structure and fish habitat; changes to soil regimes; and impacts to bank stability.

2. Page 708 of volume 7 of the 2014 FEIS stated that "No Arctic Char were captured in upper Peninsula waterbodies". Fish sampling in 2020 found Arctic Char in Lake A6, which implies that all downstream waterbodies contain Arctic Char, at least seasonally. Given the discovery of Arctic Char in Lake A6:

a. Describe the potential impacts of the complete loss of Lake A6 relative to the partial loss of A6 on Arctic Char and how the Arctic Char population in A6, A5, A4, A3, and A1 may have contributed to the population in Meliadine Lake.

3. It was proposed in the 2014 FEIS that flows from A6 and A7 would be diverted around mine infrastructure and contribute to Lake A1 with part of the diversion channel designed to provide fish habitat. With the loss of the contribution (discharge) of Lake A6 to the downstream A sub-watershed:

a. Describe how the change of flows (monthly/seasonally) from Lake A1 to Meliadine impact the use of Lake A1 by migratory fish including Arctic Char and Arctic Grayling and how will habitat change in the bay of Meliadine Lake where flows from the A sub-basin discharge.

b. What was the contribution of fish from the A sub-watershed to Meliadine Lake and how will the diversion of flows away from Lake A1 impact fish populations, distribution, and movement in Meliadine Lake?

c. The A Watershed outlet is in a shallow bay of Meliadine Lake. What is the habitat and fish use in that Bay and how will fish use of the bay on Meliadine Lake be changed over time/seasonally with the additional diversion of flows proposed in the FEIS Addendum?

d. How will the loss of known Arctic Grayling spawning and Arctic Char use of Lake A1 impact fish populations in Meliadine Lake.

e. Will changes to flow downstream of Lake A6 impact the ability for Arctic Char to migrate upstream into the A Drainage and migrate out? Will changes to flow downstream of Lake A8 impact the ability for Arctic Grayling to migrate upstream into the A sub-watershed (at A1) and migrate out?

f. Pond A7 was only sampled for 1 event in August 2011 and only with Minnow Traps (Table 4.4-1, App 3, Conceptual Fish Offsetting Plan). This lack of effort is insufficient to show the absence of any large-bodied fish, and given the presence of Arctic Grayling upstream and Arctic Grayling and Arctic Char downstream, it is assumed that Pond A7 is a Arctic Grayling bearing waterbody. The FEIS Addendum should reflect that, as should the proposed changes that include dewatering Pond A7 and Lake A6.

4. What does implications of the loss of Lake A6 and A7 have on potential recovery of the fishery (population and timeline) in the A Watershed compared to the previously proposed disconnection?

5. Does Arctic Grayling recruitment in Lake A8, A7, A6, and A5 contribute to the Arctic Grayling Population in Meliadine Lake through Lake A1?

6. Ponds/Lakes A49, A45, and A44 are noted in Table 4.4-1, App 3, Conceptual Fish Offsetting Plan with the impact being an Alteration, but the site layout indicates these waterbodies will be dewatered and there will be no connection to downstream fisheries, which means this habitat is completely destroyed not altered.

a. What is the change in the downstream flow (in monthly mean discharge and depth in stream) from what was assessed in the 2014 FEIS?

7. There is no fish sampling information for Pond A46 in summary Table 4.4-1, App 3, Conceptual Fish Offsetting Plan . What sampling was completed and can AEM provide details on the fish population and connection to other waterbodies?

8. A50 is assumed to provide habitat for ARGR because this pond is on flow path between A5 and A6. And this flow path has been noted as important ARGR spawning habitat.

a. What is the area of Stream A51-A53, Stream A5-A50, and Stream A50-A6 and how was this habitat and fish use of this area accounted during the Arctic Grayling spawning surveys of Stream A5-A6.

b. With an increased pit footprint over Ponds A52 and A53, how will the changes to the sub-watershed impact the Arctic Grayling population in A5 and downstream in Meliadine Lake.

9. Pond A53 was not proposed to be dewatered in the 2014 FEIS but is dewatered in the FEIS Addendum.

a. How will the change in drainage area impact downstream flows (add cumulative effects from other dewatering in the A Watershed)?

b. Would Pond A53 have supported an aquatic ecosystem during the mine operations?

Agnico Eagle's Response to Request:

Response 1)

The proposed work is within the project footprint identified in the 2014 FEIS. The Meliadine Extension FEIS Addendum contains refinements to the plan, largely within the 2014 FEIS footprint, that accounts for optimization of operational activities since the 2014 FEIS.

Lake A6 was anticipated to be partially dewatered in the 2014 FEIS. Under the approved 2014 FEIS the connection between Lake A6 and all water contribution to the A sub-watersheds from above Lake A1 would have been lost. The fish remaining in Lake A6 would be constrained in a smaller area, with a limited gene pool, and isolated from the downstream fish communities. The post-closure plan includes re-flooding of Lake A6. The difference in fish habitat at Lake A6 between the 2014 FEIS and the Meliadine Extension FEIS Addendum is the partial loss of degraded habitat and an isolated fish population with limited genetic variability (at post-closure) vs. a complete loss of habitat in Lake A6 which will be reflooded at post-closure with natural re-colonization by fish from the genetically diverse Meliadine Lake population.

Agnico Eagle proposes to dewater Lake A6 instead of partially filling as a precautionary measure to proactively protect fish and fish habitat from potential inadvertent releases of deleterious substances and subsequent non-compliance.

Impacts to fish and fish habitat will be characterized and quantified in the Final Fish Habitat Offsetting Plan. Differences in fish habitats between the 2014 FEIS and the Meliadine Extension FEIS Addendum will be outlined in the Final Fish Habitat Offsetting Plan.

Response 2)

Quantification of impacts were provided in the Conceptual Offsetting Plan (Appendix D-26 of the Meliadine Extension FEIS Addendum) and will be included in the Final Fish Habitat Offsetting Plan that will be submitted with the Type A Water Licence Amendment to the NWB. Lake A6 was sampled via gill nets during four studies between 2009-2020. A single Arctic char was collected in Lake A6 during the 2020-2021 fish studies, suggesting that Arctic char can access the lake, at least infrequently, and may occur in Lake A6 in low numbers. Fish require a male and a female of the same species to reproduce.

Impacts to fish and fish habitat within the impacted waterbodies will be addressed in the Final Fish Habitat Offsetting Plan. Fish community information, including the fish community for Lake A6, will be updated with new information in the Final Fish Habitat Offsetting Plan.

For purposes of the Meliadine Extension FEIS Addendum, adequate information has been presented to understand the fish and fish habit community within the mine area as well as potential impacts to the fish community. We will continue to work with the DFO through the parallel regulatory process to obtain a *Fisheries Act* Authorization.

Response 3)

As previously mentioned, the A watershed will be dewatered which represents a 1.8% recharge to Meliadine Lake.

Response 4)

See response 1).

Response 5)

Arctic grayling move into streams in the spring to spawn and move to deeper water to overwinter. Lakes A1 and A6 were identified as overwintering lakes in the 2020-2021 study (Appendix G-7: Fish and Fish Habitat Field Program, 2020 to 2021). Historic data confirms that Arctic grayling occur in Lakes A8, A7, A6, A5, and A1. Visual Arctic grayling spawning surveys completed in June 2020 confirmed presumed spawning activities between Lake A1 and Lake A6.

Given Arctic grayling presence in this lake chain and their movement habits, it is likely that Arctic grayling in the A-chain lakes contribute to the Arctic grayling population in Meliadine Lake.

For further details, refer to Table 7.3-1 of the 2014 FEIS.

Response 6)

As discussed in response to DFO-TRC-03 the A watershed (including the referenced ponds) will be dewatered but will be reflooded at closure; therefore, habitat will be restored.

Response 7)

Lake A46 is connected to Lake A6 via a culvert under the All-Weather Access Road and Lakes A45 – 44. The most recent fish community data was collected via gill net, fyke net, and minnow traps in 2011. The fish community consisted entirely of Ninespine stickleback (Appendix 7.5-C, 2014 FEIS).

Response 8)

The area of these features and associated habitat will be included in the Final Fish Habitat Offsetting Plan.

Response 9)

For context the maximum depth of Pond A53 is 0.4 m and would not support a fish community.

Interested Party:	DFO	Rec No.:	DFO-TRC-05
Re:	Fish and Fish Habitat		

Request Made by Interested Party:
With respect to the disposition of this issue, DFO recommends the Proponent:

1. Lake B59 containing Arctic Grayling, was proposed to be bermed off from mine works in the 2014 FEIS but the proposal in the 2022 Extension indicates that the lake will be dewatered. Table 4.4-1, App 3, Conceptual Fish Offsetting Plan indicates that it will be an Alteration of habitat, but it is a complete destruction/loss of habitat as indicated in Figure 1.1-4 of the FEIS Addendum.

a. What is the Arctic Grayling population of Lake A59 and how does that population contribute downstream to Lake B46 and the lower B sub-watershed.

b. What is the change in the downstream flow from B59 (in monthly mean discharge and depth in stream) from what was assessed in the 2014 FEIS? How will the loss of contributing flow impact the ability for downstream fish to reach areas where they spawn? The reduction of flow will change the quantity and timing of discharge in the lower B Sub-watershed, how will this impact fish movement in B46, B45, P2/B41, and B2 when they are connected.

2. In the 2014 FEIS, Pond B34 was left undisturbed (except for flow changes) to be later connected to Meliadine Lake through Pond B5 (Tiriganiaq Pit 2) at closure. The FEIS Addendum Site Layout (Figure 1.1-4) and the Table 4.4-1, App 3, Conceptual Fish Offsetting Plan show Pond 34 covered by a waste rock storage facility.

a. Please describe how the loss of Pond B34 and the basin will impact flows at mine closure and how long it will require for reclamation.

Agnico Eagle's Response to Request:
Response 1)
For Meliadine Extension Lake B59 will be dewatered and fish would be relocated to the next downstream suitable waterbody (e.g., B46). The area is very small and will be included in the Final Fish Habitat Offsetting Plan that will be submitted with the Type A Water Licence Amendment to the NWB.

Response 2)
For Meliadine Extension Lake B34 will be dewatered and fish would be relocated to the next downstream suitable waterbody (e.g., B46) and further details will be included in the Final Fish Habitat Offsetting Plan.

Interested Party:	DFO	Rec No.:	DFO-TRC-06
Re:	Fish and Fish Habitat		

Request Made by Interested Party:
With respect to the disposition of this issue, DFO recommends the Proponent:

1. What is the change in outflow from J1 in terms of seasonal and monthly average flows?

2. According to Addendum Appendix 3 Conceptual Fish Offsetting Plan Table 4.1-1, Lake J1 had a small amount of sampling in 2009 and 2012.

3. The stream J0-J1 (Lake J1 to Meliadine Lake) was subject to one small sampling event in 2004 and over 100 Ninespine Stickleback were captured. The fish presence and sampling event is not identified in Table 4.4-1, App 3 of the Conceptual Fish Offsetting Plan, nor has any other sampling been identified. Stream J0-J1 will have changes in flow from upstream work proposed in the FEIS Addendum. Please describe the impact of the changes to the upstream watershed on the outflow of Lake J1 and Stream J0-J1, as well as potential changes to fish use of the stream and small bay where the J watershed outlets.

a. Is the inflow from the J watershed to Meliadine Lake an important contribution of nutrient, temperature, and flow of the bay in Meliadine Lake where it is located?

b. Has fish use been sampled in the bay and will changes in seasonal flow to the bay change fish use of the bay?

Agnico Eagle's Response to Request:
Response 1)
There is no change from what was provided in the 2014 FEIS.

Response 2)
n/a

Response 3)
There is no change from what was provided in the 2014 FEIS.

Interested Party:	**DFO**	**Rec No.:**	**DFO-TRC-07**
Re:	**Fish and Fish Habitat**		

Request Made by Interested Party:
With respect to the disposition of this issue, DFO recommends the Proponent:

1. Was the channel between Lake I1 and Meliadine Lake (I0-I1) sampled for habitat and fish?

2. Is there seasonal fish use of Lake I1 and Channel to Lake I1?

3. Is Lake I1 seasonally connected to Lake J8 (even occasionally)?

Agnico Eagle's Response to Request:
Response 1)
No, the channel was not sampled but Lake I1 has been sampled.

Response 2)
Yes and most likely.

Response 3)
No.

Interested Party:	DFO	Rec No.:	DFO-TRC-08
Re:	Fish and Fish Habitat		

Request Made by Interested Party:
With respect to the disposition of this issue, DFO recommends the Proponent:

1. On page 7-168, Section 7.3.3.7.2.1 of the 2014 FEIS, AEM stated: "The Discovery Pit also overlaps slightly on the X watershed (approximately 0.020 km2) and effects are expected to be negligible and are not discussed further". In the FEIS Addendum, Figure 1.1-5 shows the mine infrastructure extending farther into the X Watershed than described in the 2014 FEIS, including the destruction of some unnamed ponds. There is no fisheries information on the X Watershed.

a. DFO recommends that AEM conduct a fish and fish habitat assessment of ponds that will be affected by the mine in the X Watershed and an assessment of the change in flow and downstream impacts.

2. In the FEIS Addendum, Chicken Head Lake (CH6) has mine infrastructure over drainages and ponds that flow into Chicken Head Lake from the west. Chicken Head Lake has a population of Arctic Grayling and Lake Trout that may move downstream through the CH series of lakes to Meliadine Lake.

a. What fish use these unnamed waterbodies, how do those fish and the flows support Chicken Head Lake, and how will the mine infrastructure affect flows and fish habitat in the CH, X, and W watersheds?

b. Where do the Arctic Grayling from Chicken Head Lake spawn?

3. Waste rock storage facility 9 appears to be farther north than previously assessed areas, partially in an area draining to the W Watershed. There is no available information in Volume 7 of the 2014 FEIS nor in the FEIS Addendum of fish use and habitat in the W Watershed.

a. DFO recommends that AEM describe what fish community exists in the W Watershed, particularly Lake W1, which appears to be affected by WRSF9. Further AEM should conduct a fish and fish habitat assessment of the change in flow and downstream impacts in the W Watershed

Agnico Eagle's Response to Request:
Response 1)
As described in the Meliadine Extension FEIS Addendum the waste rock storage facility encroaches a very small percentage of the X watershed with very small ponds most likely less than 2 metres deep; however, Agnico Eagle will evaluate these ponds next year. As per the drawings submitted with the Meliadine Extension FEIS Addendum (Figure 1.1-5) the topography has relatively steep grades that is a physical barrier to upstream movement.

Response 2)

The infrastructure will be in a small portion of the watershed and will have minimal influence on flows to Lake CH6.

Response 3)

This information was provided in the Appendix G-7 of the Meliadine Extension FEIS Addendum.

Interested Party:	DFO	Rec No.:	DFO-TRC-09
Re:	Borrow Pits		

Request Made by Interested Party:
With respect to the disposition of this issue, DFO recommends the Proponent:

1. Borrow Pit PFZ-GB22 appears to be on seasonal fish habitat adjacent to Lake C10. Does the construction of the borrow pit impact the Water Balance that was assessed in the 2014 FEIS (Section 7.3.3.6.2.3), and if so, by how much? What are the potential impacts to fish and fish habitat?

2. Borrow Pits D-GB1, D-GB2, D-GB3, D-GB3, D-GB16, and D-GB17 appear to impact fish habitat. Does the construction of the borrow pit impact the Water Balance that was assessed in the 2014 FEIS (Section 7.3.3.6.2.3), and if so, by how much? What are the potential impacts to fish and fish habitat?

3. Borrow Pit NW-GB16 appears to impact fish habitat on Lake D7 and Pond E4. Does the construction of the borrow pit impact the Water Balance that was assessed in the 2014 FEIS, and if so, by how much? What are the potential impacts to fish and fish habitat?

Agnico Eagle's Response to Request:
For any borrow pit activities, Agnico Eagle will remain at least 31 m away from the waterbodies as per Project Certificate No.006 Term and Condition 31 and Water Licence 2AM-MEL1631 Part D, Item 15.

Interested Party:	**DFO**	**Rec No.:**	**DFO-TRC-10**
Re:	**Road Location and Construction**		

Request Made by Interested Party:
With respect to the disposition of this issue, DFO recommends the Proponent:

1. The Road Management Plan does not include details, comments, or mitigation measures on fish passage accommodation at watercourse crossings.

a. Describe what the channels (including seasonally inundated flow paths) that are being crossed by the new proposed roads, including to the airstrip and windfarm; describe the types of channels and fish presence upstream and down; and describe what mitigations have been designed for fish passage.

2. It is stated in the FEIS Addendum that constructed road bases will remain the same width but the surface may be widened.

a. Will this require an increase in existing culvert length and/or redesign of crossings?

Agnico Eagle's Response to Request:
Responses 1 and 2)
This detailed level of information is not required for this Application and will be addressed through operations when construction of these activities will commence.

HEALTH CANADA (HC)

Interested Party:	**HC**	**Rec No.:**	**HC-AQ-01**
Re:	**Air quality calculation discrepancy**		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Provide all values in Tables H-12-D-5a and H-12-D-5f rounded to the same decimal place for consistency.

2. Provide a discussion on ways to reduce the uncertainty in the assessment of health risks posed by exposure to DPM and aldehyde, or identify additional mitigation measures to reduce exposure.

3. Clarify the use of two different TRVs for DPM and provide revised calculations if needed.

Agnico Eagle's Response to Request:
Response 1)
Agnico Eagle does not agree that updated tables are required for the following reasons. All hazard quotients (HQs) in Appendix H-12-D were consistently reported to one significant figure. Reporting more significant figures than 1 implies more precision in the values than is warranted. Note also that the values presented in Tables H-12-D-5a and H-12-D-5f of the Meliadine Extension are the same as those in 2014 FEIS; as there were no changes to the predicted peak concentrations or acute air thresholds for diesel particulate matter (DPM) and aldehyde, there were no changes to the HQs.

Response 2)
To account for model uncertainty a common practice is to explicitly adjust model inputs to account for the most adverse or severe output (worse case scenario) which adds a high degree of conservatism to the model. For example, uncertainty in the predictive air quality modeling was reduced by using peak 1-hour concentrations from the 5-year modelling dataset for each of the 6 scenarios considered for the operations phase. It was conservatively assumed that the Mine operated continuously at its maximum design capacity over the duration of the 5 years of modelling.

Only peak predicted concentrations in Scenario 2 for Receptors 1 and 22 exceeded the acute thresholds (HQ=2), while 98th percentile and lower percentile statistics did not. Lower peak concentrations were predicted at Receptor 22 in Scenario 1 (HQ=1.2 for DPM) and at Receptor 1 in Scenario 6 (HQ=1.4 for aldehyde), and thus 98th percentile concentrations in these scenarios are not expected to exceed the acute thresholds.

Other ways to reduce uncertainty is by incorporating safety factors or sensitivities to the model that account for human variability in terms of sensitivity to chemicals. The selected receptors included the very young and elderly members of the public who may have special sensitivities to mucus membrane irritants.

These special sensitivities were accounted for in the conservative selection of the toxicity benchmark. This was described in Section 10.3.7.4 of the Meliadine Extension FEIS Addendum.

Uncertainty is further reduced by using the most protective of the available health-based thresholds or was based upon odour, which is a more sensitive endpoint than a health-based endpoint as indicated by Texas Commission on Environmental Quality (TCEQ) for assessing both acute and chronic exposures. Most often, these air thresholds are presented as air concentrations at and below which health effects are not expected to occur and may incorporate additional safety factors for higher risk members of the community.

Under conservative modeled scenarios with the addition of modeled sensitivities, Agnico Eagle is then able to confirm with a high degree of confidence that if impacts are not observed under worse case scenario, then the risk to all affected receptors would not be underestimated under construction, operational, closure, and post-closure scenarios. With respect to acute health effects posed by exposure to DPM and aldehyde, the overall impacts were not considered to be significant to members of the public in the LSA because the conditions causing the residual effect are of low magnitude, are considered to occur infrequently, and the overall potential for the health effect to occur is considered to be unlikely.

Response 3)

There are not two different toxicity reference values (TRVs) for DPM in the chronic air quality assessment.

Tables H-12-D-10a to H-12-D10-10f apply the chronic inhalation annual health-based threshold of 0.03 µg/m^3 as a screening value to identify COPCs for the chronic air quality assessment, as described in Section 10.3.7.4, subsection *Problem Formulation* (pdf page 531 to 532). The selection of chronic annual air thresholds is provided in Table H-12-D-7. Based on this screening, DPM was carried forward as a COPC for further assessment.

Table 10.3-9 presents the selected toxicity reference values (TRVs) for the chronic air quality assessment; the inhalation unit risk of 0.0003 [µg/m^3]$^{-1}$ was selected as the TRV for the risk characterization.

Interested Party:	**HC**	**Rec No.:**	**HC-AQ-02**
Re:	**Air quality data**		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Provide modelling of fine particulate matter (PM2.5), coarse particulate matter (PM10), and TSP resulting from newly proposed activities in the Extension Project or a justification why concentrations are not expected to contribute to the project-alone scenario.

2. Confirm whether other metals or contaminants besides cadmium and iron have been monitored in TSP since mine operations began. Provide information as to why cadmium and iron were selected for monitoring in TSP.

Agnico Eagle's Response to Request:
Response 1)
Agnico Eagle refers the reader to the response provided to ECCC-TRC-03.

Response 2)
In accordance with Term and Condition 1b of the Project Certificate, concentrations of particulate-bound metals of relevance to the Project (iron and cadmium – see Section 2.2.4 of the Air Quality Monitoring Plan submitted with the annual report) are measured in TSP samples to understand implications for human health, as predicted in the Project's Human Health Risk Assessment (2014 FEIS Volume 10). Results are compared to the FEIS-selected health-based screening values (Golder, 2014, Volume 10, Appendix 10-2), as well as FEIS-predicted maximum concentrations of contaminants for monitoring-site locations Receptor 1 and Camp (Golder 2014, Volume 10).

Interested Party:	**HC**	**Rec No.:**	**HC-AQ-03**
Re:	**Air quality modelling**		

Request Made by Interested Party:
With respect to the disposition of this issue, Health Canada recommends the Proponent:

1. Provide a detailed description of the air quality assessment scenarios (including for the project alone, and baseline plus project scenarios), with assumptions and conclusions clearly stated.

Agnico Eagle's Response to Request:
Agnico Eagle refers the reader to Section 5.4 of Appendix H-1 of the Meliadine Extension FEIS Addendum. The air quality model assumes the current modelling, mining is assumed to happen in three surface pits and five underground areas because the three scenarios are all based on the worst-case year (2030). Refer to the mine plan presented in Table 2.2-1 of the Meliadine Extension FEIS Addendum for further details of activities happening in 2030.

Interested Party:	HC	Rec No.:	HC-AQ-04
Re:	Existing Condition Reports		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Provide existing air quality data (including concentrations of volatile organic compounds, polycyclic aromatic hydrocarbons, trace metals, carbon monoxide, TSP, PM2.5, PM10, DPM) covering the period of 2016 – present (i.e., existing conditions).

2. Describe how data from existing conditions were used to inform the assessment and conclusions related to air quality.

Agnico Eagle's Response to Request:
Response 1)
Agnico Eagle refers the reader to the Annual Reports where NO_2, SO_2 TSP, $PM_{2.5}$, PM_{10} are reported. Specifically, the following sections of the Annual Reports discuss air quality monitoring:

- 2016 Annual Report – Appendix A of the Air Quality Monitoring Report
- 2017 Annual Report – Section 3.1
- 2018 Annual Report – Section 7.8.1
- 2019 Annual Report – Section 7.8.1
- 2020 Annual Report – Section 7.8.1
- 2021 Annual Report – Section 7.7.1

Response 2)
As referenced in Section 5.2.3 of the Meliadine Extension FEIS Addendum, calculated annual average concentrations of NO_2 and SO_2 were well below the Nunavut Ambient Air Quality Standards (NAAQS) and the 2014 FEIS maximum predicted values. 2020 was the fourth full year of monitoring for gaseous compounds.

Dustfall results are mostly within Alberta Environment's Ambient Air Quality Guidelines for recreational and industrial areas (Air Quality Monitoring Report). In 2020, one of 40 on-site samples exceeded the recreational guideline, and no sample exceeded the industrial guideline. Historically, an increase in measured dustfall rates has occurred since mid-2017 when the construction period began, as anticipated. Despite increasing site activity, levels of dustfall at site perimeter monitoring stations are generally well within Alberta recreational guidelines, with exceedances occurring in a maximum of 4% of total dustfall samples in any given year since that time.

As annual monitoring demonstrates results are below the 2014 predictions; therefore, the focus was on NO_2 and SO_2 as the CAAQS were implemented following the 2014 FEIS submission.

Interested Party:	HC	Rec No.:	HC-N-01
Re:	Incorporation of existing noise monitoring data		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Provide a summary of the quantitative noise data collected from 2016 to present.

2. Provide a map showing monitoring station locations relative to receptors included in the 2022 HHRA and include a description of new receptors.

3. Revise predicted noise levels to include all noise sources, including existing noise from Project-related activities.

4. Compare revised predicted noise levels associated with the proposed Project extension activities to relevant acoustic guidelines and/or standards. If noise emissions exceed these guidelines, mitigation measures should be considered.

Agnico Eagle's Response to Request:
Response 1)
Agnico Eagle refers the reader to the response provided to the SDFN/NDFN-TC-03. As well as Annual Reports where noise monitoring is reported, specifically, the following sections within the Annual Reports:

- 2016 Annual Report – Appendix C
- 2017 Annual Report – Section 3.2
- 2018 Annual Report – Section 7.7
- 2019 Annual Report – Section 7.7
- 2020 Annual Report – Section 7.7
- 2021 Annual Report – Section 7.6

Response 2)
The reader is referred to Figure 10.3-2 of the Meliadine Extension FEIS Addendum which includes monitoring station locations relative to receptors included in the Meliadine Extension HHRA. All new receptors for the Meliadine Extension are cabins.

Response 3
Agnico Eagle does not agree that a revised noise model is required. The noise assessment for the Meliadine Extension does consider cumulative effects from baseline conditions (i.e., pre-industrial/natural noise sources), existing/approved Mine activities, and proposed Meliadine Extension activities.

As described in more detail below, predicted cumulative noise levels presented in the Meliadine Extension FEIS Addendum already include "*all noise sources, including existing noise from Project-related activities*". As such, Agnico Eagle respectfully submits the revision requested by Health Canada is not required.

Table 5 of the Noise Modelling Report (Appendix H-2 of the Meliadine Extension FEIS Addendum) presents the pre-Meliadine noise level for each receptor in the study area. The pre-Meliadine noise level represents the combined noise contribution from natural and non-industrial sources that existed in the study area before development of the Meliadine Mine. Table 5 of the Noise Modelling Report also presents the cumulative noise level for each receptor in the study area. The cumulative noise level in Table 5 represents the combined noise contribution from natural sources, non-industrial sources, and existing and approved Meliadine operations (i.e., operations that were approved as part of the 2014 FEIS).

Table 16 of the Noise Modelling Report presents predicted noise levels associated with the Meliadine Extension. To be clear, predicted noise levels presented in Table 16 include all major Meliadine noise sources that would be active if the Meliadine Extension were to proceed. In particular, predicted noise levels in Table 16 include the contribution from the processing plant, power plant, and ancillary operations, from mining activities in the Tiriganiaq, Wesmeg, Pump, F Zone, Discovery, and Tiriganiaq-Wolf mining areas, and from traffic on the all-weather access road. Select columns in Table 16 also present the noise contribution from the wind turbines and optional airstrip being proposed as part of the Meliadine Extension. In summary, the noise levels presented in Table 16 capture all major noise sources associated with Meliadine operations post-Extension. The noise levels presented in Table 16 do not omit any part of existing, approved, or proposed Meliadine operations.

Table 17 of the Noise Modelling Report presents predicted cumulative noise levels at receptors in the study area during post-Extension Meliadine operations. Cumulative noise levels in Table 17 were calculated by summing the Meliadine Extension noise levels from Table 16 with the pre-Meliadine noise levels from Table 5. Cumulative noise levels in Table 17 capture noise from natural and non-industrial sources and from all major sources associated with Meliadine operations post-Extension. The noise levels presented in Table 17 do not omit any part of existing, approved, or proposed Meliadine operations.

Table 18 of the Noise Modelling report classifies the magnitude of incremental noise effects by comparing cumulative noise levels from the 2014 FEIS (i.e., consisting of the natural sources, non-industrial sources, and existing/approved Meliadine operations) to cumulative noise levels post-Extension (i.e., consisting of natural sources, non-industrial sources, and all Meliadine sources that will be active post-Extension). Table 18 indicates the magnitude of noise effects from the Meliadine Extension is predicted to be negligible or low at all receptors in the study area. A similar analysis is presented in Table 5.5-2 of the Meliadine Extension FEIS Addendum.

Response 4)

As noted above, the Meliadine Extension FEIS Addendum classified the magnitude of potential noise effects based on cumulative noise levels that include contributions from natural and non-industrial sources and from all major sources associated with Meliadine operations post-Extension. The effects

classification did not omit or exclude any part of existing, approved, or proposed Meliadine operations. The magnitude of potential noise effects was classified using the same four-category system developed for the 2014 FEIS. The magnitude of noise effects from the Meliadine Extension was predicted to be negligible or low at all receptors in the study area.

In addition, Table 10.3-17 of the Meliadine Extension FEIS Addendum evaluated potential noise effects to human health using the percent highly annoyed (%HA) metric from Health Canada. Guidance from Health Canada indicates "*Noise mitigation measures should be considered when a change in the calculated %HA at any given receptor location exceeds 6.5%*." (Health Canada 2017). Table 10.3-17 of the Meliadine Extension FEIS Addendum shows the change in %HA resulting from the Meliadine Extension is predicted by less than 6.5% at all receptors in the study area. As such, noise mitigation is not required based on Health Canada guidance.

Reference:

Health Canada. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Noise.

Interested Party:	**HC**	**Rec No.:**	**HC-N-02**
Re:	**Noise monitoring**		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Implement additional noise monitoring and/or mitigation if noise levels exceed their approved limit and/or in the event of public complaints.

2. Develop and implement a community consultation plan that would include consultations with the public prior to any particular noise activities.

3. Implement a public complaint response mechanism, along with mitigation activities, in the event of public complaints related to noise emissions from the wind farm or airstrip.

Agnico Eagle's Response to Request:
Response 1)
Agnico Eagle adheres to the Noise Abatement and Monitoring Plan (Appendix D-22 of the Meliadine Extension FEIS Addendum) and as outlined in adaptive management section (Section 5 of the Noise Abatement and Monitoring Plan) measures are included should exceedances be recorded.

Response 2)
Agnico Eagle does not feel that a specific community consultation plan is needed prior to noise activities; however, facilitates regular engagement activities through our Community Relations department as a forum for updates on activities, projects, and other matters related to the mine.

Response 3)
Agnico Eagle already has a complaint response mechanism "Tusaajugut" that can be utilized by the public, should the public wish to raise a noise complaint (or any other topic) related to the windfarm and airstrip.

Interested Party:	**HC**	**Rec No.:**	**HC-N-03**
Re:	**Spatial boundaries related to noise**		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Revise Figure 5.1-2 Spatial Boundaries Noise to reflect the 5 km boundary in order to represent the Site Study Area (SSA) and LSA based on the proposed Project-related activities from the Meliadine Extension FEIS Addendum, and any additional receptor locations if applicable. Update the noise assessment if additional receptor locations are identified.

The Proponent may find the following Transport Canada resources specific to noise from airport operations useful: https://www.tc.gc.ca/en/services/aviation/operating-airports-aerodromes/managing-noise/exposure-forecast.html.

Agnico Eagle's Response to Request:
Agnico Eagle confirms that Figure 1 from the Noise Modelling Report (Appendix H-2) presents the correct noise study area (i.e., a 5 km buffer on the Meliadine Extension footprint, including the airstrip and wind turbines) and the noise assessment does not need to be updated.

Interested Party:	HC	Rec No.:	HC-N-04
Re:	Noise level calculations		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Include the rural location adjustment noise factor and revise the %HA calculations accordingly to ensure that acoustic modelling is protective of human health.

For more information, please refer to: Health Canada. (2017). Guidance for Evaluating Human Health Impacts in Environmental Assessment: Noise. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.

Agnico Eagle's Response to Request:
As described in more detail below, the rural location adjustment factor was correctly included when calculating %HA for all receptors except those located within the community of Rankin Inlet. As such, Agnico Eagle respectfully submits the revision requested by Health Canada is not required.

Table 10.3-17 of the Meliadine Extension FEIS Addendum presents %HA values for each receptor in the noise study area. Sample calculations for receptor NPOR006 are presented below to show how the rural location adjustment factor was applied.

As indicated in Table 5 of the Noise Modelling Report (Appendix H-2 of the Meliadine Extension FEIS Addendum), the cumulative noise level at NPOR006 associated with existing/approved Meliadine operations (in combination with natural and non-industrial sources) is 39.8 dBA. As indicated in Table 17 of the Noise Modelling Report, the cumulative noise level at NPOR006 associated with post-Extension Meliadine operations (in combination with natural and non-industrial sources) is 43.3 dBA.

Because noise emissions from Meliadine operations are effectively continuous 24 hours per day, the %HA analysis in the Meliadine Extension FEIS Addendum assumed that cumulative noise levels from Table 5 and Table 17 are applicable to both the daytime and nighttime periods. As such, at NPOR006:

- the unadjusted daytime noise level is 39.8 dBA for the pre-Extension case
- the unadjusted nighttime noise level is 39.8 dBA for the pre-Extension case
- the unadjusted daytime noise level is 43.3 dBA for the post-Extension case
- the unadjusted nighttime noise level is 43.3 dBA for the post-Extension case

Because NPOR006 is located in a remote area where receptors may have *"…a greater expectation for… peace and quiet…"*, Health Canada guidance indicates a 10 dBA penalty should be applied to the daytime and nighttime noise levels before calculating %HA (Health Canada 2017). In the Meliadine Extension FEIS Addendum, the 10 dBA rural area adjustment was applied to all receptors except for those located within

the community of Rankin Inlet (i.e., NPOR022, NPOR023, NPOR024, and NPOR025). Rankin Inlet is a busy population centre, so the rural area adjustment is not appropriate for receptors within Rankin Inlet.

After application of the remote area adjustment to the noise levels at NPOR006:

- the adjusted daytime noise level is 49.8 dBA for the pre-Extension case (i.e., 39.8 dBA unadjusted + 10 dBA rural adjustment)
- the adjusted nighttime noise level is 49.8 dBA for the pre-Extension case (i.e., 39.8 dBA unadjusted + 10 dBA rural adjustment)
- the adjusted daytime noise level is 53.3 dBA for the post-Extension case (i.e., 43.3 dBA unadjusted + 10 dBA rural adjustment)
- the adjusted nighttime noise level is 53.3 dBA for the post-Extension case (i.e., 43.3 dBA unadjusted + 10 dBA rural adjustment)

The noise level input to Health Canada's %HA calculation is the average day-night noise level (Ldn), which is a time-average of the adjusted daytime and nighttime noise levels, after application of an additional 10 dBA penalty to the nighttime noise level. At NPOR006:

- the pre-Extension Ldn is 56.2 dBA
    - based on an adjusted daytime noise level of 49.8 dBA (i.e., 39.8 dBA unadjusted + 10 dBA rural adjustment) and an adjusted nighttime noise level of 59.8 dBA (i.e., 39.8 dBA unadjusted + 10 dBA rural adjustment + 10 dBA nighttime adjustment)
- the post-Extension Ldn is 59.7 dBA
    - based on an adjusted daytime noise level of 53.3 dBA (i.e., 43.3 dBA unadjusted + 10 dBA rural adjustment) and an adjusted nighttime noise level of 63.3 dBA (i.e., 43.3 dBA unadjusted + 10 dBA rural adjustment + 10 dBA nighttime adjustment)

Inputting the Ldn values above into equation F4 from the Health Canada guidance document (Health Canada 2017) yields the following %HA values for receptor NPOR006:

- 4.8% highly annoyed for the pre-Extension case
- 7.4% highly annoyed for the post-Extension case

The difference between the post-Extension and pre-Extension %HA at NPOR006 is 2.6% (i.e., 7.4% minus 4.8%), which is less than the 6.5% threshold at which Health Canada recommends noise mitigation measures be considered (Health Canada 2017). Similarly, Table 10.3-17 of the FEIS Addendum shows the difference between post-Extension and pre-Extension %HA is less than 6.5% for all other receptors in the study area. As such, based on Health Canada guidance on annoyance, mitigation is not required to address potential noise effects from the Meliadine Extension.

Agnico Eagle has provided further details below regarding Health Canada's comment in their detailed review comment re: *In addition, when evaluating impulsive noise sources, 60 dBA (LAmax) should not be exceeded more than 10-15 times per night to be protective of sleep disturbance (Health Canada, 2017).*

As discussed in Section 3.4 of the Noise Modelling Report (Appendix H-2 to the Meliadine Extension FEIS Addendum), most noise sources associated with Meliadine operations are "steady-state" in the sense that they emit noise into the environment almost continuously. With the exception of explosive blasting, which typically occurs once or twice per day during the daytime period, the only Meliadine activity that will emit noise intermittently is the optional on-site airstrip proposed as part of the Meliadine Extension. The airstrip will emit noise into the environment when airplanes take off or land, but the airstrip will be effectively silent at other times.

To protect against noise-induced sleep disturbance, Health Canada guidance recommends that outdoor noise levels from intermittent events not exceed 60 dBA more than 10 to 15 times per night (Health Canada 2017). As noted above, blasting at Meliadine typically occurs during the daytime period and fewer than 10 times per day; therefore, based on the Health Canada guidance, there is no potential for intermittent noise from blasting to result in sleep disturbance. Because aircraft may take off or land at the proposed airstrip during the daytime or nighttime period, there is potential for intermittent aircraft noise to result in sleep disturbance **if** noise from aircraft events exceeds 60 dBA more than 10 to 15 times per nighttime period.

For each receptor considered in the Noise Modelling Report, the table below presents the maximum noise level associated with an aircraft take off or landing event. Noise levels in the table below were predicted using the same European Civil Aviation Conference (ECAC) computer model described in the Noise Modelling Report.

Noise Receptor	Maximum Noise Level During Aircraft Event[(a)] [dBA]
NPOR006	70
NPOR007	82
NPOR010	55
NPOR012	51
NPOR014	<50
NPOR015	59
NPOR016	56
NPOR017	54
NPOR018	54
NPOR019	55
NPOR020	<50
NPOR021	<50
NPOR022	<50
NPOR023	<50
NPOR024	<50
NPOR025	<50
NPOR026	82
NPOR027	62
NPOR028	51
NPOR029	51

[(a)] "Aircraft event" is a take off or landing at the proposed on-site airstrip.

As indicated in the table above, there are four receptors at which noise from a take off or landing event may exceed 60 dBA: NPOR006, NPOR007, NPOR026, and NPOR027. At the other 16 receptors in the study area, the maximum noise level from a take off or landing event is less than 60 dBA; at these 16 receptors there is no potential for noise-induced sleep disturbance based on the intermittent noise threshold from Health Canada guidance.

As noted in Table 15 of the Noise Modelling Report, Agnico Eagle is planning a total of 216 aircraft events per six-month period (i.e., 108 take offs and 108 landings). This translates to an average of 36 aircraft events per month or slightly more than one aircraft event per day. Given the relatively small number of aircraft events per month, it is extremely unlikely that 10 or more aircraft events would occur during a single nighttime period. Therefore, it is extremely unlikely the proposed airstrip will result in noise-induced sleep disturbance, even at the four receptors where noise from a single aircraft event (i.e., take off or landing) may exceed the 60 dBA threshold from Health Canada guidance. For example, while modelling predicts the noise level during an aircraft event may exceed 60 dBA at NPOR006, there will likely never be a single nighttime period during which 10 or more aircraft events will occur.

Reference:

Health Canada. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Noise.

Interested Party:	HC	Rec No.:	HC-WQ-01
Re:	Arsenic in freshwater		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Clarify whether consultation with local harvesters supports the exclusion of the 100 m mixing zone for water quality screening in Meliadine Lake.

2. Describe the outcomes of any consultation activities regarding post-closure use of pit lakes for drinking water, and the communication plan for potential risks of arsenic in drinking water for local harvesters as part of the site closure at the end of the mine life.

Agnico Eagle's Response to Request:
Response 1)
As per 2021 monitoring results at MEL-13, water quality at surface at the mixing zone is 0.00048 mg/L (0.48 ug/L) which is dramatically less than the end of pipe limits as referenced by Health Canada. The SSWQO is 25 ug/L and drinking water guidelines is 10 ug/L; therefore, the comments by Health Canada are not applicable nor should be a concern at the diffuser location. In addition, the diffuser is located 11.39 m below surface; therefore, there is no concern about the water quality.

Response 2)
The predicted average of arsenic concentration in Tiri Pit Lake is 8.33 ug/L (0.00833 mg/L). Figure 6-22 from the water balance report (Appendix H-7 of the Meliadine Extension FEIS Addendum) shows the peak occurs in active closure and not post-closure.

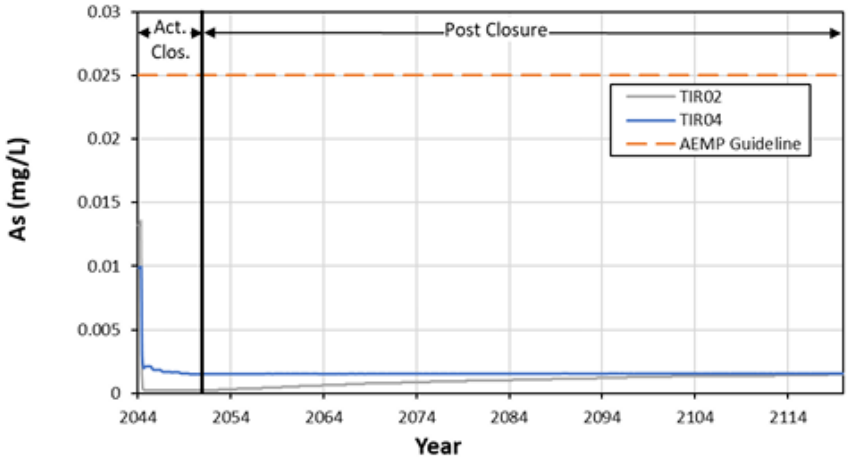


Figure 6-22: Projected concentrations of arsenic (As) at TIR02/04 Pit Lake during Active Closure (2044-2050) and Post-Closure (2051 onwards).

Prior to closure, Agnico Eagle will have 19 years of operational monitoring and 7 years of active closure monitoring to inform post-closure predictions. As noted through consultation, Meliadine Lake has historically been used as a drinking water source.

Interested Party:	HC	Rec No.:	HC-WQ-02
Re:	Groundwater and surface water quality		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Describe how proposed mitigations will prevent post-closure leaching of metals or other COPCs from waste rock or pit lakes into groundwater.

2. Clarify whether there is evidence of potential connectivity between groundwater and surface water in the mine area such that contaminated groundwater could result in contamination.

Agnico Eagle's Response to Request:
Response 1)
As stated in Section 7.1.2 of the Meliadine Extension FEIS Addendum, hydrogeology and groundwater is a Valued Ecosystem Component (VEC) but it does not have assessment endpoint because groundwater is not used as a resource by local populations and is not anticipated to become a resource in the future. Consistent with the 2014 FEIS, for this Application, there was an assessment of both changes to groundwater and hydrogeology that are specific to that system, and changes to groundwater and hydrogeology that may present potential effect pathways to other VECs. Changes in hydrogeology and groundwater by itself can only be evaluated in context to how it changes the other components such as fish habitat. As a result, potential effects to groundwater were examined, but residual impacts were not classified because these were classified through effects to endpoints such as fish habitat and ecological risk assessment. The Meliadine Extension is expected to result in no detectable to negligible environmental change in groundwater and hydrogeology quality and/or quantity.

The waste rock storage facilities are all installed over continuous permafrost and/or lakes with no open taliks to the deep groundwater regime beneath the permafrost. Therefore, no hydraulic connection exists between the waste rock storage facilities and the groundwater. The Discovery WRSF has waste rock with Potential Acid Generating (PAG) and Metal Leaching (ML) relative to the other WRSFs at Meliadine. Therefore, a 6 m NPAG/NML thermal cover has been proposed to maintain the bottom of the active layer above the material with PAG/ML potential. Therefore, the interaction between infiltration beyond the proposed cover system is unlikely.

As described in the Water Balance and Water Quality report (Appendix H-7), concentrations of POPCs are predicted to reach long-term equilibrium levels in post-closure with no exceedances of AEMP benchmarks for all pit lakes for constituents that could result in change to the ecological end points.

Response 2)

During mining, the underground mines will act as a sink for groundwater flow. Groundwater seeping into the Underground mine will originate from surface waters and from deep bedrock. Groundwater flow originating from deep bedrock will draw high TDS content groundwater to the mine. The TDS content of groundwater flowing into the mine will increase as the mine workings become deeper because the TDS in the deep bedrock increases with depth, and because of upwelling of saline water from beneath the mine due to the vertical hydraulic gradient that is created as a result of project activities. The creation of the underground mine will induce groundwater to flow toward the mine from all directions. Although temporary changes to groundwater flow directions will occur, no measurable effects are anticipated in the receiving environment. Furthermore, the water level in the dewatered lakes will be restored during closure, which will in turn restore the groundwater flow directions.

Interested Party:	HC	Rec No.:	HC-HHRA-01
Re:	Mercury in fish tissues		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Use the pTDI values and local consumption patterns to assess potential human health risks of MeHg in country foods, and specifically, fish tissues, for baseline and baseline plus Project scenarios.

Agnico Eagle's Response to Request:
Acknowledged - If an assessment of mercury concentrations in fish tissue was conducted as part of a country food assessment, then Health Canada guidance with regards to the provisional total daily intake value and local consumption values would be followed. Note that Section 10.2.4.5 provides a summary of baseline conditions for fish tissue chemistry, as reported the 2014 FEIS. Mercury is not chemical of potential concern in the effluent, and no changes in mercury concentrations in fish tissue due to the Mine are expected.

Interested Party:	**HC**	**Rec No.:**	**HC-HHRA-02**
Re:	**Metals and PAHs in soil**		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Clarify the methodologies (including supporting references) used to calculate predicted deposition soil concentrations of gold, yttrium, and PAHs.

2. Provide a rationale why baseline soil concentrations of gold, yttrium, and PAHs were not measured from soil samples collected at the mine site.

3. Provide information on the revised soil remediation criteria to be used for the Abandoned Military Site Reclamation Protocol guidelines.

4. Provide a discussion on why the updated soil remediation criteria are appropriate for the Meliadine site

Agnico Eagle's Response to Request:
Response 1)
There are no measured baseline (pre-2014) soil concentrations for gold, yttrium, and PAHs (see response 2 below).

For the Meliadine Extension FEIS Addendum, the same approach for the soil quality assessment were used as in the 2014 FEIS.

The typical average soil concentration for gold and yttrium were based on general references for elements in soil (e.g., Emsley 2003). These parameters are not typically analyzed in the soil as part of the metals analytical suite. One analytical laboratory that was recently contacted provided a range of detection limits of 0.02 to 1 mg/kg for gold and 0.001 to 5000 mg/kg for yttrium. Thus the approach of approximating baseline concentration as half the detection limit would not be feasible. For gold and yttrium, there are no TRVs and the limited toxicity data suggested that the risk to ecological and human health due to exposure to these metals in soil was unlikely.

As noted below, PAHs are not anticipated to occur in soil under background conditions. The use of half the detection limit for PAHs was a conservative approach to estimating background conditions for the purposes of the soil quality assessment.

Response 2)

Baseline data for rare earth elements such as Yttrium, precious metals such as gold, and PAHs are not routinely measured at baseline as they were not anticipated to occur in the soil until the presence of emissions during the operational phase of the project. As such they were not collected because the Meliadine Mine is located in a pristine area of Nunavut, Canada. No other sources of anthropogenic emissions of these chemicals are present and, therefore, background air emissions and subsequently soil concentrations of gold, Yttrium and PAHs were not collected as part of the baseline environmental assessment.

Response 3)

The proposed criteria is presented in Appendix B of the Landfarm Management Plan (Appendix D-19 of the Meliadine Extension FEIS Addendum).

Response 4)

Agnico Eagle currently follows the Government of Nunavut Remediation Guidelines (as outlined in Section 3.5 of the Landfarm Management Plan); however, through the Meliadine Extension application is proposing to change the soil remediation criteria used to the Abandoned Military Site Reclamation Protocol guidelines for the protection of human health and the management limit, which are more appropriate for the Meliadine site.

A Remedial Action Plan (RAP) was prepared and outlines a proposed approach for managing petroleum hydrocarbon (PHC)-impacted soil at the Meliadine Mine. The RAP includes an overview of the Meliadine landfarming activities, site conditions and a review of the regulatory framework for PHC remediation in the Arctic. The objective of the RAP is to provide site-specific PHC remediation guidelines that, based on the pathways and receptors present at Meliadine, are more suitable/applicable to the future end land use than those currently being applied.

Reference:

Emsley, J. 2003. Nature’s building blocks: an A-Z guide to the elements. Oxford: Oxford University Press.

Interested Party:	HC	Rec No.:	HC-HHRA-03
Re:	Human Health Risk Assessment Receptors		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Clarify which receptor locations were included in the current assessment and for which environmental media/pathways.

2. Revise Figure 10.3-2 to clearly identify the Extension activities relative to the receptor locations.

Agnico Eagle's Response to Request:
Response 1)
As discussed in Section 10.3.7.2 (Project Environment) and Section 10.3.7.4 (Air Quality), all receptor locations as presented in Figure 10.3-2 were included in the HHRA. For the Meliadine Extension FEIS Addendum, the receptor locations from the 2014 FEIS were carried forward for the assessment of TSP, PM_{10}, $PM_{2.5}$, dust, metals, PAHs, and VOCs in air, and new air predictions from 2021 for NO_2 and SO_2 was added. Figure 10.3-2 also present the noise points of reception (NPOR) were updated noise predictions were provided for the HHRA.

Response 2)
Figure 10.1-5 provided in the Meliadine Extension FEIS Addendum in Section 10.3.2 (also provided below), clearly identifies the footprint of the Extension activities outlined in green. Likewise, Figure 10.3-1 provided in Section 10.3.7 of the FEIS Addendum (provided below) clearly shows all of the receptors that were used in the Meliadine Extension FEIS Addendum and previous assessment in the 2014 FEIS.

Figure 10.1-1: Meliadine Mine Approved and Meliadine Extension Footprint

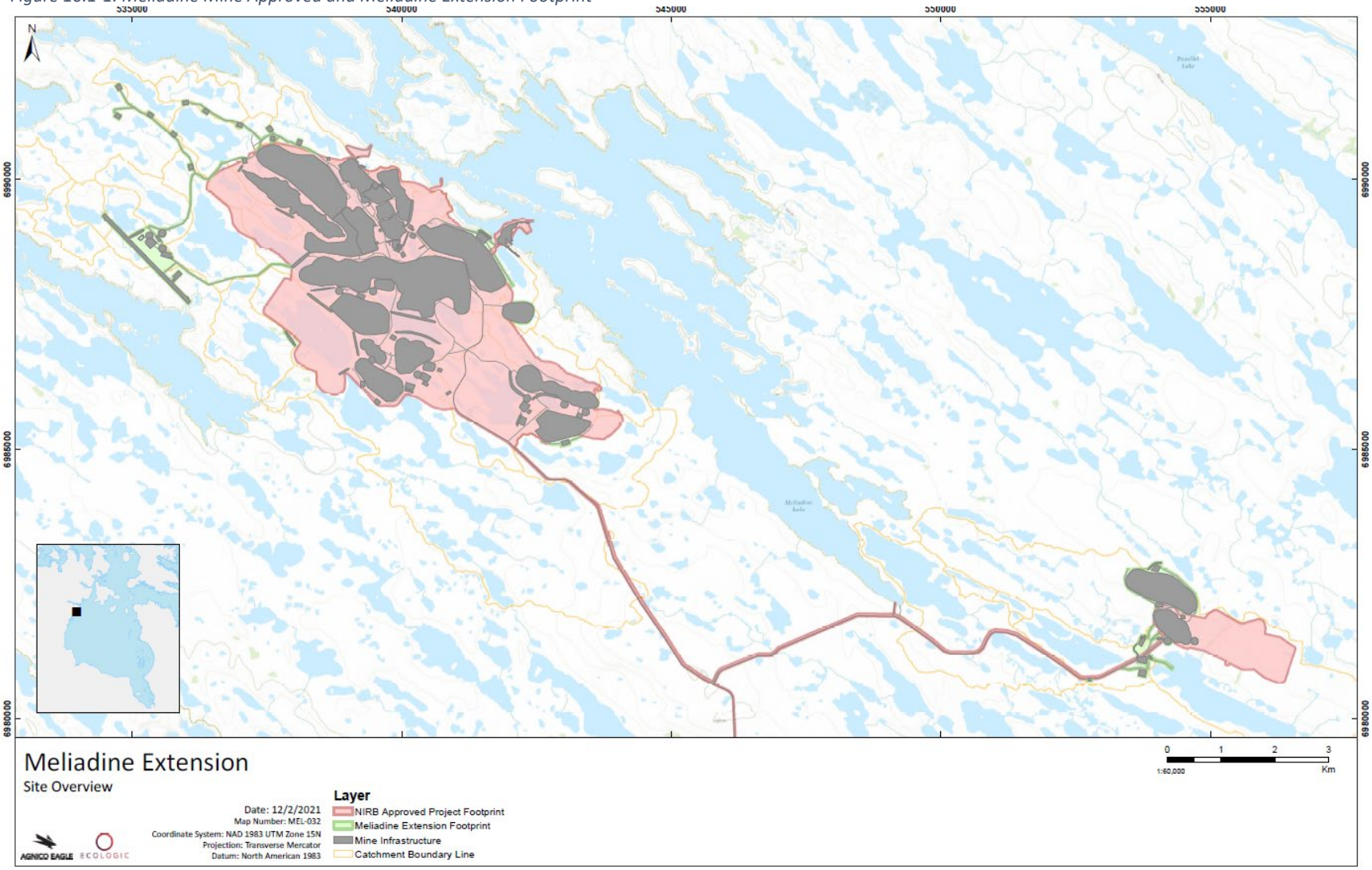
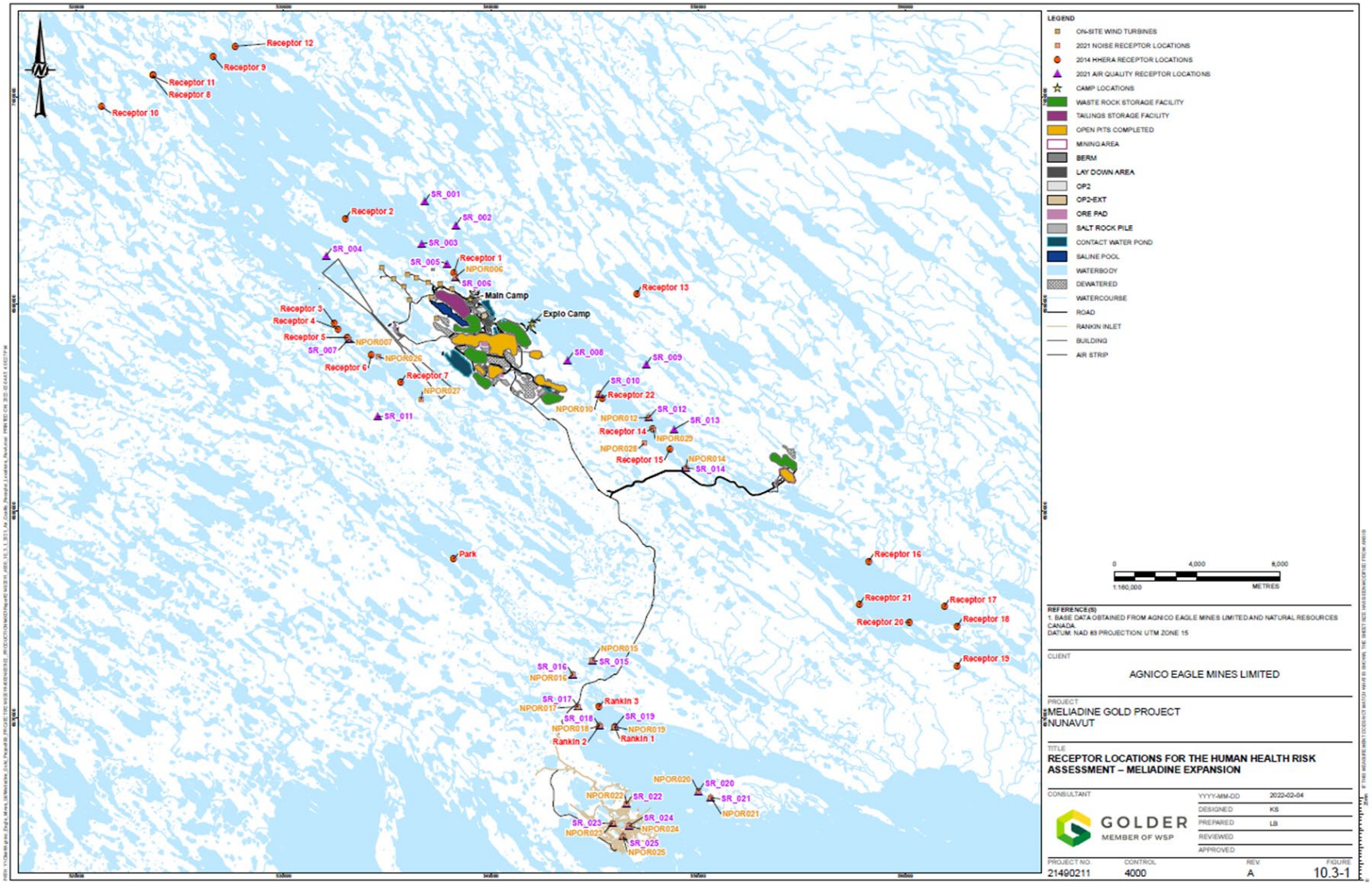


Figure 10.3-2: Receptors Locations for the Human Health Risk Assessment – Meliadine Extension



Interested Party:	**HC**	**Rec No.:**	**HC-HHRA-04**
Re:	**Exposure Assessment**		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Provide a rationale validating the assumed exposure period of 30 days for a recreational user at a cabin location.

2. Provide clarification as to whether the dose-averaging approach considers the impacts of continuous exposure in comparison to intermittent exposure.

Agnico Eagle's Response to Request:
Response 1)
The HHRA assumed a 30 days per year exposure period as a worst-case scenario/upper bound prediction to add conservatism to the model. Based on consultation, the recreational user would be present at a cabin location for a few days (e.g., 2-3 days) at a time throughout the course of a year.

Response 2)
The dose-averaging approach considers the 30 days per year exposure is not continuous but rather is distributed throughout the year. This is consistent with the results of consultation on how recreational users are expected to use the cabin locations.

Interested Party:	**HC**	**Rec No.:**	**HC-HHRA-05**
Re:	**Sediment**		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Provide additional clarification or a rationale to support the conclusion of no residual impacts of the Project for sediment quality.

Agnico Eagle's Response to Request:
Residual impacts on sediment quality were assessed within Section 7.4 of the Meliadine Extension FEIS Addendum. Section 7.4.3 details any changes in sediment quality anticipated from the Extension and Section 7.4.4 is where the residual impacts have been identified and assessed.

Agnico Eagle refers the reader to review the residual impact sections for surface water and sediment quality (Section 7.4.3) for further clarity on how the residual impacts were assessed and the conclusion of no residual impacts from the Meliadine Extension for sediment were made.

Interested Party:	HC	Rec No.:	HC-HHRA-06
Re:	Elevated baseline conditions		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Clarify whether background (baseline) soil concentrations were based on pre-2014 data, and which statistical form is presented (e.g., mean, 95 percentile, etc.) in Appendix H.

2. Update the tables in Appendix H-12-F to include footers that define any symbols used in the tables.

3. Conduct a multi-media assessment for COPCs that exceed guideline values under baseline conditions, (e.g., arsenic). Total exposure via all relevant environmental media should be characterized under baseline and project plus baseline scenarios.

Agnico Eagle's Response to Request:

Response 1)

The background (baseline) soil concentrations are maximum pre-2014 measured concentrations. The same background (baseline) concentrations were used as in the HHERA for the 2014 FEIS.

Response 2)

Notes for Tables H-12-F-1a to H-12-F-1f are:

All predicted soil concentrations are in milligrams per kilogram (mg/kg).
(a) CCME Soil Quality Guidelines for the Protection of Environmental and Human Health - Residential/Parkland. The SQG_{HH} was used when available.
(b) US EPA Screening Values for Residential Soil adjusted to HQ=0.2 (non-carcinogen) and $1x10^{-5}$ (carcinogen)
(c) SQG_{ECO} residential/parkland
NV - No Value
*There is no background concentration for this compound, concentrations are shown as the increments from soil deposition only
Bold and shaded = Exceeds Background + 10% and Standard
Shaded = Exceeds Standard
Bold = Exceeds Background + 10%

Response 3)

The purpose of the HHERA was to evaluate potential health effects due changes caused by the Meliadine Extension. Agnico Eagle does not believe a multi-media assessment is required for parameters that naturally exceed soil quality guidelines when there is no change to soil quality.

Interested Party:	HC	Rec No.:	HC-CF-01
Re:	Baseline and existing conditions in country food items		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Confirm if baseline or existing concentrations of COPCs in vegetation, fish tissues, and/or wild meats were included in the HHRA, or provide a justification for their exclusion.

Agnico Eagle's Response to Request:
Baseline or existing concentrations of COPCs in country foods such as vegetation (e.g., berries), fish, or wild meats (e.g., caribou) were not presented in the HHRA because a country foods assessment was not necessary. For the terrestrial environment, no changes in soil quality were identified as a result of the Meliadine Extension (when compared to baseline [pre-2014] soil quality) (see Section 10.2.7.3), and thus changes in country foods such as berries or wild meat were not expected due to the Mine (see Section 10.3.7.6).

In aquatic receiving environments containing fish, the predicted concentrations of COPCs in water are less than guidelines meant to protect aquatic life and human health. Furthermore, there are no COPCs related to the Mine that have a tendency to biomagnify in aquatic food webs. The concentrations of COPCs in large-bodied fish such as Lake Trout are not expected to increase as a result of the Meliadine Extension (see Section 10.3.7.8).

Interested Party:	HC	Rec No.:	HC-HHRA-08
Re:	Contamination of country foods via soil		

Request Made by Interested Party:
With respect to the disposition of this issue, HC recommends the Proponent:

1. Provide additional information in the rationale or relevant data to support the conclusion that a complete country foods exposure pathway is not present.

Agnico Eagle's Response to Request:
The purpose of the HHRA was to evaluate potential health effects due changes caused by the Meliadine Extension. Although concentrations of some metals exceeded soil quality guidelines under baseline conditions, no changes in soil quality were identified as a result of the Meliadine Extension. Specifically, predicted concentrations of these metals were within 10% of maximum measured baseline (pre-2014) concentrations (see Section 10.2.7.3). Therefore, no changes to country foods were expected and a country foods assessment was not necessary. This approach to assessing country food quality was the same as that used for the HHRA in the 2014 FEIS.

NATURAL RESOURCES CANADA (NRCan)

Interested Party:	NRCan	Rec No.:	NRCan-TRC-01
Re:	Groundwater - Complexity of vertical groundwater flow through taliks and their monitoring		

Request Made by Interested Party:

No specific recommendation to provide as these comments are intended to highlight that the knowledge of the local groundwater flow patterns near and within open taliks (particularly at intermediate elevations) may prove to be more complex than expected and that monitoring groundwater flow through an open talik is a challenging undertaking. Consequently, there may be limitations to what can be expected with respect to understanding groundwater flow near open taliks, groundwater monitoring and the interpretation of the results.

Agnico Eagle's Response to Request:

The Meliadine Mine has been in operation since 2019 and have been monitoring groundwater components of the operation and Agnico Eagle will continue to monitor groundwater flow patterns for the Meliadine Extension.

Interested Party:	NRCan	Rec No.:	NRCan-TRC-02
Re:	Groundwater - Assessment of tailings and waste rock disposal in exhausted pits using the hydrogeology model.		

Request Made by Interested Party:

NRCan recommends that detailed plans and description of proposed tailings and waste rock emplacement are needed prior to their assessment.

Specific hydrogeology modelling assessments along flowpaths from exhausted pits proposed for tailings and waste rock storage to downflow receiving surface waters should be made prior to approval of these options/alternatives.

The hydrogeology model should be used to assess potential groundwater flowpaths from exhausted pits proposed for tailings and waste rock storage to downflow receiving surface waters where there is open talik near the pits.

Groundwater flowpath assessment should include:

i) delineation of the groundwater flowpaths through the exhausted pits to downflow receiving surface waters using particle tracking,

ii) the time required for groundwater flow along these pathways,

iii) groundwater inflow rates through tailings and waste rock stored in exhausted pits,

iv) groundwater discharge rates to receiving surface waters, v) consideration whether there is a need for a barrier/cover between tailings or waste rock and pit lakes or underlying rock and

v) assessment of relative contributions of groundwater to surface waters and their potential for impacts on other valued components.

The temporal boundaries should include sufficient time for monitoring of potential groundwater transport pathways from exhausted pits with tailings or waste rock to receiving surface waters.

Specific groundwater management plans and monitoring may need to be developed for tailings and waste rock stored in exhausted pits to verify the accuracy of assessments and ensure the timely and effective implementation of appropriate mitigation measures.

Agnico Eagle's Response to Request:

Deposition of tailings and waste rock into exhausted open pits has been presented as an alternative in the Meliadine Extension FEIS Addendum. It is expected that updates and refinements to selected studies will be discussed and evaluated as part of the Type A Water Licence Amendment with the NWB.

Interested Party:	**NRCan**	**Rec No.:**	**NRCan-TRC-03**
Re:	**Groundwater – Assessment of closure and post-closure phases**		

Request Made by Interested Party:

NRCan recommends that the hydrogeology modelling should include closure and post-closure phases.

Provide results of the predicted post-closure groundwater flow system (e.g., equipotential maps and tabulated inflows and outflows to pits and lakes) for steady state groundwater flow conditions after pits have been flooded and groundwater levels have recovered. Indicate the time at which steady state conditions are predicted.

Agnico Eagle's Response to Request:

The water level in the dewatered lakes will be restored during closure, which will in turn restore the groundwater flow directions. Flooded open pits may produce an open talik; however, the open pits will develop static water levels that will reproduce the current regional groundwater flow conditions. Therefore, any changes to the regional groundwater flow directions are expected to be negligible. Nonetheless, the hydrogeology modelling will be updated for closure and post-closure phases as part of the Type A Water Licence Amendment with the NWB.

Interested Party:	**NRCan**	**Rec No.:**	**NRCan-TRC-04**
Re:	**Groundwater - Effect of saline water storage in B7**		

Request Made by Interested Party:

NRCan recommends that the hydrogeology modelling should be updated to include a saline boundary condition for SP B7 since this has the potential to influence groundwater density and flow.

Hydrogeology modelling should be used to assess the potential effects of saline groundwater infiltration at SP B7 on groundwater flow, flowpaths, and groundwater quality, including for the closure and post-closure phases.

Agnico Eagle's Response to Request:

The natural groundwater at Meliadine is at 6% salinity. Most of the saline water that will be stored in SP B7 comes from the underground which will then be discharged to Itivia Harbour during the life of mine and returned underground at closure. As presented in the hydrogeology modelling report (Appendix H-6), infiltration of surface water to groundwater flow paths is limited. The predicted TDS are relatively stable, reflecting low intersection of freshwater from the lakes and from shallow groundwater in the open taliks below these lakes. Overall, lake water contributions to Tiriganiaq and Wesmeg, which are the closest to SP B7, and range from less than 1% to 8%.

Interested Party:	NRCan	Rec No.:	NRCan-TRC-05
Re:	Groundwater - Groundwater flow basin near the Discovery underground mine		

Request Made by Interested Party:

NRCan recommends that an initial assessment of pre-mining groundwater flowpaths using the existing hydrogeology model is needed for the area between lake UN11, lake CH6 and lake UN01, including specific groundwater flowpaths from the Discovery underground mine to its ultimate discharge location. Such flowpaths can be assessed using particle tracking procedures in the hydrogeology model. This assessment is necessary to define the extent of the groundwater basin that includes the Discovery underground mine.

If flowpaths for the Discovery underground mine lie within the UN01 groundwater basin, the hydrogeology/groundwater Local Study Area for the Discovery mine would need to be updated. Given that only a small portion of lake UN01 is included, a larger area of lake UN01 may be required for both the Regional Study Area and the hydrogeology model.

Subject to the assessment of groundwater flowpaths in the vicinity of the Discovery mine, potential impacts of the Discovery underground mine should be re-evaluated with the knowledge that the Discovery underground mine may be in a different groundwater flow system and hydraulically connected to a different receiving lake (UN01).

Agnico Eagle's Response to Request:

The natural groundwater at Discovery is in the range of 6% salinity. Based on existing site conditions, Agnico Eagle does not see any regional and local impacts from the naturally saline groundwater with the regional lakes and this process would not change with the operation and closure of Discovery underground. Any saline water stored on surface is primarily occurring from underground activity.

Furthermore, as described in the hydrogeology model report, predicted TDS at Discovery remains stable and is not predicted to intercept freshwater from Lake CH6 which is 600 metres to the southwest.

Interested Party:	NRCan	Rec No.:	NRCan-TRC-06
Re:	Groundwater - Consequences of inclusion of grouting in hydrogeology model and groundwater inflow estimates		

Request Made by Interested Party:

NRCan recommends that the potential for excessive groundwater inflows and their magnitude caused by reduced effectiveness of grouting measures should be assessed (i.e., groundwater inflows if grouting were less effective than predicted, or absent).

The Water Management Plan should ensure the ability to mitigate for excessive saline groundwater inflows using mitigation measures other than grouting since the potential reduced efficiency of grouting could be a cause for groundwater inflow above predictions.

Agnico Eagle's Response to Request:

The effectiveness of grouting was assessed and presented in Table 10 of the Hydrogeology Modelling Report, which shows that reducing the effectiveness of grouting by increasing its hydraulic conductivity of a factor of 3 only results in an 8% increase in predicted inflows for year 2027.

The ability to mitigate for more than expected saline groundwater inflows is outlined in the Groundwater Management Plan and the Adaptive Management Plan.

Interested Party:	NRCan	Rec No.:	NRCan-TRC-07
Re:	Thermal modelling- To support design of Mine Waste Storage Facilities		

Request Made by Interested Party:

NRCan's recommendations regarding updates to thermal and stability analysis for the mine waste management facilities to support advanced design and inform finalization of closure plans are as follows.

• Consider incorporation of the most recent information available with respect to climate change scenarios (e.g., IPCC 6th Assessment) in advanced design of mine waste management facilities and development of final closure plans

• Consider inclusion of a range of climate scenarios in their analysis supporting advanced design and finalization of closure plans.

Reference:

IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2391 pp. doi:10.1017/9781009157896.

Agnico Eagle's Response to Request:

Agnico Eagle will continue to use monitoring data to calibrate predictions in accordance with the Water Licence Part E, Item 14. Current and future monitoring data collected during the proposed operations phase of Meliadine Extension will be used to guide the studies and optimizations required for the Final Closure and Reclamation Plan of the waste management facilities (i.e., TSF and Discovery WRSF thermal cover).

Agnico Eagle does not agree that additional future emission scenarios (low to high forcing) should be conducted for advanced design and finalization of closure plans. As part of the 2014 FEIS, Agnico Eagle considered an ensemble of climate change projections, including review of as many models and climate scenarios. Subsequently, RCP 4.5 was determined to be reasonably conservative and was selected and approved for use in design of infrastructure for the existing water licence. Agnico Eagle will continue to use monitoring data during operations and closure to calibrate model predictions per Part E, Item 14 of the Water Licence and finalization of the closure plan.

Interested Party:	**NRCan**	**Rec No.:**	**NRCan-TRC-08**
Re:	**Ground thermal regime in the project area**		

Request Made by Interested Party:

NRCan recommends the following regarding on refinements to thermal and ground models utilized for assessments of mine water inflow to the Discovery Mine as design advances.

1. Include the temperature data collected (when suitably stabilized) from the boreholes drilled in the vicinity of the Discovery deposit to update thermal and ground water models to inform assessments of mine water inflows and saline water management plans.

Agnico Eagle's Response to Request:

As stated by NRCan, the temperatures associated with deep boreholes recently drilled in the vicinity of the Discovery Deposit had not stabilized when the Meliadine Extension FEIS Addendum was being prepared so data acquired from these boreholes was not incorporated into the thermal analysis. The collected data, which has now stabilized, will be included to update the thermal and hydrogeological models that will be presented under the Type A Water Licence Amendment with the NWB.

Interested Party:	NRCan	Rec No.:	NRCan-TRC-09
Re:	Temporary water storage - Impacts associated with temporary water storage in pits		

Request Made by Interested Party:

NRCan's recommendations regarding analysis to assess impacts associated with temporary water storage in pits such as TIR02 on the surrounding permafrost as design advances during the water licensing stage.

1. Conduct a detailed quantitative analysis to assess impacts of temporary water storage in TIR02 pit on surrounding permafrost as design advances to: inform assessment of impacts on pit wall and underground mine stability and subsequent mitigation plans; inform finalization of water management plans.

Agnico Eagle's Response to Request:

Agnico Eagle refers the reader to the response provided in CIRNAC-TRC-03.

Interested Party:	**NRCan**	**Rec No.:**	**NRCan-TRC-10**
Re:	**Geochemistry**		

Request Made by Interested Party:

NRCan agrees with the overall proposed approach for mine waste management to minimize risk associated with materials reporting elevated acid rock drainage and arsenic leaching potential. Continuous operational monitoring is recommended to confirm the reactivity of materials determined through field and lab testing to date with associated updates to validate water quality model predictions. Through this, the Proponent should ensure the approach to waste management captures all risk for ARD and arsenic leaching. Mitigation plans should support the timely identification and management of material that is more reactive than anticipated in terms of potential acid generation or metal-loid leaching. In this case, the need for cover of the WRSF should be re-evaluated prior to closure, if necessary. Potentially acid generating and metal leaching material should be avoided for construction activities and closure cover material.

Agnico Eagle's Response to Request:

Agnico Eagle thanks NRCan for their comments. Agnico Eagle will continue to operate Meliadine Extension under the best available practices and will continue to use monitoring, laboratory testing, and the approved Mine Waste Management Plan and ARD-ML Management Plan to calibrate predictions in accordance with the Water Licence Part E, Item 13. Currently the operation has to update the predictions on an annual basis. Current and future monitoring data collected during the proposed operations phase of Meliadine Extension (19 years) will be used to guide the studies and optimizations required for the Final Closure and Reclamation Plan of the waste management facilities (i.e., TSF and Discovery WRSF thermal cover).

TRANSPORT CANADA (TC)

Interested Party:	NRCan	Rec No.:	TC-TRC-01
Re:	Construction and operation of an on-site airstrip		

Request Made by Interested Party:

TC requests that AEM complete the consultation and file the summary report with the Minister of Transport as required by the Canadian Aviation Regulations prior to commencing construction of the aerodrome. AEM can find further details at: https://laws-lois.justice.gc.ca/eng/regulations/SOR-96-433/FullText.html#s-307.01. TC recommends that AEM contact the Department (Aerodromes Group) before starting the consultation to ensure it is done in accordance with CARs 307 at: CASPNR-SACRPN@tc.gc.ca.

Agnico Eagle's Response to Request:

Should the airstrip move forward in the future, Agnico Eagle will complete consultation and file the summary report with the Minister of Transport as required by the Canadian Aviation Regulations prior to commencing construction of the airstrip.

Interested Party:	**NRCan**	**Rec No.:**	**TC-TRC-02**
Re:	**Lakes and Ponds Dewatering**		

Request Made by Interested Party:

TC requests that AEM submit the application for exemption under CNWA s. 24 with all the required information to the Department. AEM can find further details at: https://tc.canada.ca/en/programs/navigation-protection-program/apply-exemption-under-canadian-navigable-waters-act.

Agnico Eagle's Response to Request:

Agnico Eagle will complete and submit the application for exemption under CNWA s. 24 with all the required information to Transport Canada.

Interested Party:	**NRCan**	**Rec No.:**	**TC-TRC-03**
Re:	**Watercourse crossings**		

Request Made by Interested Party:
TC requests that AEM:

• Complete an assessment of the navigability of the waterways that will be crossed by the proposed road north of Lake D7, under the CNWA, before starting construction of the road. AEM can refer to TC's Project Review Tool to assist them with determining the navigability of the impacted waterways: https://npp-submissions-demandes-ppn.tc.canada.ca/projectreview-outildexamenduprojet.

• For any navigable waterways, review the Minor Works Order prior to construction and determine if this proposed work meets all the criteria established by the Order. For more information on the types of structures that fall within the Minor Works Order, AEM can refer to https://laws-lois.justice.gc.ca/eng/regulations/SOR-2019-320/index.html. If the Lake D7 road's crossing of a navigable waterway is not a minor work, then AEM must either submit an application for approval to TC's Navigation Protection Program or complete the public resolution process prior to starting construction of the road.

Agnico Eagle's Response to Request:
Agnico Eagle will review the Minor Works Order prior to construction and if applicable, submit the application to Transport Canada.