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Fish and Fish Habitat Protection Program
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June 30, 2023

Your file Votre référence
NIRB 125515 / 11MN034

Our file Notre référence
11-HCAA-CA7-00014

Nunavut Impact Review Board
Attn: Emily Koide
Technical Advisor III
PO Box 1360 (29 Mitik Str.)
Cambridge Bay, NU
X0B 0C0

Via email to : info@nirb.ca

**Subject: Comment Request for Agnico Eagle Mines Limited's Meliadine Gold
Mine Project 2022 Annual Report**

Dear Emily Koide,

The Fish and Fish Habitat Protection Program (the Program) of Fisheries and Oceans Canada (DFO) received your request for comments on April 26, 2023. DFO has reviewed the above 2022 Annual Report in regards to its mandate, i.e. the management, protection and conservation of fish and their habitats. The Nunavut Impact Review Board (NIRB) invited parties to respond to the following topics:

1. Effects monitoring
 - a) Whether the conclusions reached by Agnico Eagle Mines in the 2022 Annual Report are valid; and
 - b) Any areas of significance requiring further supporting information or any changes to the monitoring program which may be required.
2. Compliance monitoring
 - a) Provide a summary of any compliance monitoring and/or site inspections undertaken in association with the Project, including specifically;
 - Identify the terms and conditions from the Project Certificate which have been incorporated into any permits, certificates, licences or other approvals issued for the Project, where applicable;
 - b) A summary of any inspections conducted during the 2022 reporting period, and the results of these inspections; and
 - c) A summary of Agnico Eagle's compliance status with regards to authorizations that have been issued for the Project.

Specifically, DFO has reviewed the 2022 Annual Report and Appendices
5 – Water Balance and Quality Model; 6 – Annual Geotechnical Inspection Report
7 – 2021 Annual Geotechnical Report Agnico Eagle Responses and Action Table

8 – 2022 Annual Geotechnical Report Agnico Eagle Responses and Action Table
 16 - 2022 Reportable Spills; 17 - 2022 Reportable Spills; 19 - 2022 AEMP Report; 22 - 2022 Blast Monitoring Memo; and 30 - 2022 Marine Mammal and Seabird Observation Report.

Performance on Project Certificate Terms and Conditions 30, 31, 33 and 34 (Freshwater Aquatic Environment); and 76, 77, 78, 79, and 80 (Marine Wildlife) were incorporated under DFO's review of the 2022 Annual Report.

DFO provides the following comments for the NIRB's consideration:

1. Effects Monitoring

- a) Whether the conclusions reached by Agnico Eagle Mines in the 2022 Annual Report are valid;

DFO is generally agreeable with Agnico Eagle Mine's reporting

- b) Any areas of significance requiring further supporting information or any changes to the monitoring program which may be required.

DFO has the following comments or concerns to provide at this time related to effects monitoring.

Comment Number:	DFO-1
Subject/Topic:	Erosion of CP1 Berm
References:	Appendix 6: Annual Geotechnical Inspection Report, Sec 3.2
Comment:	Gap/Issue: Erosion issues were identified in the CP1 Berm and a toe berm was constructed downstream of the CP1 Berm.
Conclusion/Request:	AEM to provide details on if the toe berm construction interacted with Fish or Fish Habitat and whether erosion resulted in sediment being mobilized to the aquatic environment downstream of CP1.

Comment Number:	DFO-2
Subject/Topic:	Culverts
References:	Appendix 6: Annual Geotechnical Inspection Report, Sec 12 & 13; Appendix 7; and Appendix 8; Appendix 31-10 Water Management Plan
Comment:	Gap/Issue: Some culverts on the AWAR and Rankin Inlet Bypass Road are undersized for flow and more than half of the culverts inspected show signs of erosion. The roads (AWAR and Rankin Inlet Bypass Road) are blocking flow causing ponding of water at identified locations.

	<p>The Annual report does not identify fish and fish habitat issues with culverts and flow management and does not provide a plan to address the issues identified. Appendix 7, <i>2021 Annual Geotechnical Report Agnico Eagle Responses and Action Table</i>, identifies a few actions that AEM is committed to, but does not address the potential of sediment entering fish habitat nor the impacts to fish passage. AEM also states that additional culverts will be installed during the waterline construction in 2024 (Appendix 8, <i>2022 Annual Geotechnical Report Agnico Eagle Responses and Action Table</i>).</p>
Conclusion/Request:	<p>Proponent to provide a plan for repair and/or replacement of damaged culverts prioritizing repairs to culverts with potential to affect fish passage and those affecting fish and fish habitat along the roads.</p> <p>AEM should provide an updated Road Management Plan that includes actions to be taken to avoid contravention of the Fisheries Act by the deposit of sediment into fish habitat and addresses potential fish passage concerns at crossings.</p>

Comment Number:	DFO-3
Subject/Topic:	Location Data of Shipping Vessels
References:	Appendix 30: Meadowbank and Meliadine Mines Marine Mammal and Seabird Report, 2022
Comment:	<p>Gap/Issue : Project Certificates 004, 006, and 008 require vessels supplying the Meadowbank Complex and Meliadine mines to avoid sensitive marine mammal and seabird habitats such as haul-outs and breeding colonies.</p> <p>Ongoing outages for location data of ships - AEM stated in 2020, 2021, and 2022 report that “<i>Additional effort will be made in 2022 to ensure Groupe Desgagnés provides accurate track data to Agnico Eagle</i>”. To this day, vessels continue to have AIS issues lasting 12 hours to several days.</p>
Conclusion/Request:	<p>Proponent to provide additional details on the “<i>Additional effort</i>” being implemented to ensure accurate vessel tracks, and compliance with setbacks from sensitive habitats.</p> <p>Proponent to retrieve the missing information from other sources of information.</p>

Comment Number:	DFO-4
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Subject/Topic:	Marine Mammal Monitoring Program
References:	Appendix 30: Meadowbank and Meliadine Mines Marine Mammal and Seabird Report, 2022
Comment:	Gap/Issue: Current Marine Mammal Monitoring survey efforts (1 survey per day, lasting 1.5-2 hours) are not sufficient for effective marine mammal monitoring.
Conclusion/Request:	Proponent to update their marine mammal monitoring protocol and include increased monitoring efforts. This updated protocol should be developed by a marine mammal expert, be reviewed and approved by DFO and aim at effectively detecting and avoiding marine mammals during shipping.

Comment Number:	DFO-5
Subject/Topic:	Aquatic Invasive Species
References:	Shipping Management Plan (Version 4)
Comment:	<p>Gap/Issue: Current monitoring plans do not include a monitoring program for aquatic invasive species.</p> <p>There is a risk of introducing aquatic invasive species through haul contamination from ships coming from Quebec.</p>
Conclusion/Request:	Proponent to include a non-Indigenous Species/Aquatic Invasive Species Monitoring Program around zones of higher risk. This monitoring plan should be developed by an expert, be reviewed and approved by DFO and response measure should be added to the shipping management plan.

Comment Number:	DFO-6
Subject/Topic:	Underwater Noise
References:	Shipping Management Plan / MMSO / Noise Monitoring
Comment:	<p>Gap/Issue: Underwater noise from shipping vessels has the potential to elicit disturbance effects on marine mammals by reducing their ability to travel, communicate, and find food.</p> <p>During the 2022 shipping season, 14 vessels served the project. We currently do not know what noise level and characteristic is produced by those shipping vessels and the potential impact on marine mammals.</p>
Conclusion/Request:	Proponent to monitor and model their noise footprint using expert support. This model should aim at evaluating the impact of shipping noise on marine mammals present on

	the shipping route. A Shipping Management Plan should be updated according to the model.
Comment Number:	DFO-7
Subject/Topic:	Appendix on fish and fish habitat
References:	NA
Comment:	Gap/Issue: The Meliadine Mine Project reporting does not include an appendix specific to fish and fish habitat. Such a report is provided by AEM for the Meadowbank complex and allows Fisheries and Oceans Canada to properly monitor compliance with the <i>Fisheries Act</i>
Conclusion/Request:	Proponent to provide an appendix including, but not limited to: <ul style="list-style-type: none"> • Report on death of fish; • Report on Harmful Alteration, Disruption and Destruction of fish habitat; • Report on fish passage issues; • Fish-out activities; • Measures implemented to avoid and mitigate impacts to fish or fish habitat; and • Offsetting activities.

2. Compliance Monitoring

- a) Provide a summary of any compliance monitoring and/or site inspections undertaken in association with the Project, including specifically;
 - Identify the terms and conditions from the Project Certificate which have been incorporated into any permits, certificates, licences or other approvals issued for the Project, where applicable;
 - Terms and conditions have been incorporated into a Fisheries Act Authorization only for the Pond Dewatering Project.
- b) A summary of any inspections conducted during the 2022 reporting period, and the results of these inspections;
 - A site visit was conducted by DFO and CIRNAC in July 2022.
 - As noted in Section 6 of the 2022 Annual Monitoring Report, DFO issued a Warning Letter to AEM related to the infilling of Pond J6 that had been previously reported and was observed during the site visit.
 - During the site visit a number of watercourse crossings on the All Weather Access Road and the Rankin Inlet Bypass road were identified as being likely barriers to fish movement.
 - Measures to address the fish passage barriers are being discussed between AEM and DFO, and a plan is required to ensure that the watercourse crossings are in compliance with the Fisheries Act.
- c) A summary of Agnico Eagle's compliance status with regards to authorizations that have been issued for the Project.

- The proponent is largely compliant with the terms and conditions that pertain to DFO's mandate but is required to address fish passage issues. DFO will continue to work with the proponent to ensure compliance.

If you have any questions with the content of this letter, please contact me by email at jose.audet-lecouffe@dfo-mpo.gc.ca. Please refer to the file number referenced above when corresponding with the Program.

Yours sincerely,

A handwritten signature in black ink that reads "José Audet-Lecouffe". The signature is written in a cursive style with a large, stylized 'J' and 'L'.

José Audet-Lecouffe
Senior Biologist
Fish and Fish Habitat Protection Program
Fisheries and Oceans Canada

CC:
Alasdair Beattie, Fisheries and Oceans Canada
Paul Harper, Fisheries and Oceans Canada