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Information Request to the Nunavut Impact Review Board (NIRB)

Agnico Eagle Mines Limited (AEM) Whale Tail Pit Expansion Project

Submitted to: Nunavut Impact Review Board

February 21, 2019

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Executive Summary

Agnico Eagle Mines Ltd. submitted the updated Final Environmental Impact Statement Addendum (FEIS Addendum) for the “Whale Tail Pit Expansion Project” proposal (the Expansion Project) on December 19, 2018. The Expansion Project is focused on expanding the mining operations of the Whale Tail Pit development, which would overlap the physical footprint of the approved Whale Tail Pit Project and extend further onto the Amaruq exploration area. The Expansion Project activities include expansion of the Whale Tail Pit footprint and extension of operations from a four (4) year development to an eight (8) year development period, development of the IVR open pit, underground mining of Whale Tail and IVR pits, on-site mine infrastructure, water management infrastructure, waste rock storage facilities, and haul road and site access.

On behalf of Fisheries and Oceans Canada (DFO), the Fisheries Protection Program (FPP) has reviewed the updated FEIS Addendum and associated management plans related to the Expansion Project, as they relate to the departmental mandate under the *Fisheries Act*, to maintain the sustainability and ongoing productivity of commercial, recreational and Aboriginal fisheries. DFO-FPP’s primary focus of this review was to ensure that works, undertakings and activities are conducted in compliance with the applicable provisions of the *Fisheries Act*.

The fisheries protection provisions of the *Fisheries Act* (2013), specifically subsection 35(1), state: “No person shall carry on any work, undertaking or activity that results in serious harm to fish that are part of a commercial, recreational or Aboriginal fishery or to fish that support such a fishery.” However, under paragraph 35(2)(b) of the *Fisheries Act*, the Minister of Fisheries and Oceans may issue an authorization with terms and conditions in relation to a proposed work, undertaking or activity that may result in serious harm to fish. Serious harm to fish is defined in Section 2 of the *Fisheries Act* as the death of fish, or permanent alteration to or destruction of fish habitat.

DFO-FPP is providing the following Information Request (IR) submission in response to the Nunavut Impact Review Board’s (NIRB) letter dated January 10, 2019, requesting IRs related to the Expansion Project under consideration.

1 Introduction

Agnico Eagle Mines Ltd. submitted the updated Final Environmental Impact Statement Addendum (FEIS Addendum) for the “Whale Tail Pit Expansion Project” proposal (the Expansion Project) on December 19, 2018. Fisheries and Oceans Canada Fisheries Protection Program (DFO-FPP) is submitting Information Requests (IRs) on the FEIS Addendum to the Nunavut Impact Review Board (NIRB) to address information gaps within the FEIS Addendum. The requested information will allow DFO-FPP to provide a thorough review and comments in the technical review period.

As directed by the NIRB in their letter dated January 10, 2019, this IR submission focuses on analysis of information presented by Agnico Eagle Mines Ltd. (AEM) as part of the Expansion Project Application. The objective is to seek clarification and obtain additional required information for the assessment of the Expansion Project in relation to DFO-FPP’s mandate.

2 Mandate, Relevant Legislation and Policy

The *Constitution Act* (1982) provides the Federal Government with exclusive authority for coastal and inland fisheries within Canada’s territorial boundaries. DFO exercises this power through, the administration of the *Fisheries Act* and some aspects of the *Species at Risk Act*. Under the *Fisheries Act*, DFO is responsible for the management, protection and conservation of fish (which include marine mammals as defined by the *Fisheries Act*) and their habitats.

DFO-FPP undertakes the regulatory review of the Expansion Project in and around fisheries waters to ensure that works, activities and undertakings are conducted in such a way that the proponents are in compliance with the applicable provisions of the *Fisheries Act*.

The mandate of DFO-FPP is to maintain the sustainability and ongoing productivity of commercial, recreational and Aboriginal fisheries. Sub-section 35 (1) of the *Fisheries Act* states that “No person shall carry on any work, undertaking or activity that results in *serious harm to fish* that are part of a commercial, recreational, or Aboriginal fishery or to fish that support such a fishery.”

Fisheries and Oceans Canada interprets *serious harm to fish* as:

- the **death of fish**;
- a **permanent alteration** to fish habitat of a spatial scale, duration or intensity that limits or diminishes the ability of fish to use such habitats as spawning grounds, or as nursery, rearing, or food supply areas, or as a migration corridor, or any other area in order to carry out one or more of their life processes;
- the **destruction of fish habitat** of a spatial scale, duration, or intensity that fish can no longer rely upon such habitats for use as spawning grounds, or as nursery, rearing, or

food supply areas, or as a migration corridor, or any other area in order to carry out one or more of these life processes.

However, under Paragraph 35 (2) (b) of the *Fisheries Act*, the Minister of Fisheries, Oceans and the Canadian Coast Guard may issue an authorization with terms and conditions in relation to a proposed work, undertaking or activity that may result in serious harm to fish. The above are subject to the consideration of the four factors in Section 6 of the *Fisheries Act*:

1. The contribution of the relevant fish to the ongoing productivity of commercial, recreational or Aboriginal fisheries;
2. Fisheries management objectives;
3. Whether there are measures and standards to avoid, mitigate or offset serious harm to fish that are part of a commercial, recreational or Aboriginal fishery, or that support such a fishery; and
4. The public interest.

DFO-FPP is guided by the “Fisheries Protection Policy Statement (2013)”, which is intended to provide guidance to Canadians and ensure compliance with the *Fisheries Act*. The *Fisheries Protection Policy Statement* addresses key threats to the productivity and sustainability of our fisheries, through standards and guidelines to avoid, mitigate, and offset impacts to fisheries. The “Fisheries Productivity Investment Policy: A Proponent’s Guide to Offsetting (2013)” provides guidance on undertaking effective measures to offset serious harm to fish that are part of or that support a commercial, recreational or Aboriginal fishery, consistent with the fisheries protection provisions of the *Fisheries Act*. The objective of offsetting is to counterbalance unavoidable *serious harm to fish* and the loss of fisheries productivity resulting from a project. For more information, see: <http://www.dfo-mpo.gc.ca/pnw-ppe/pol/index-eng.html>.

The *Species at Risk Act* (SARA) is intended to prevent Canadian indigenous species, subspecies and distinct populations of wildlife from being extirpated or becoming extinct. SARA facilitates the recovery of wildlife species that are extirpated, endangered or threatened as a result of human activity and manage species of special concern (to prevent them from becoming endangered or threatened). The Minister of Fisheries, Oceans and the Canadian Coast Guard is the competent minister for listed aquatic species that are fish as defined in the *Fisheries Act* Section (2) and for marine plants as defined in the *Fisheries Act*, Section 47.

Environmental and Climate Change Canada (ECCC) is responsible for the administration and enforcement of the pollution prevention provisions of the *Fisheries Act*, Sections 34 and 36-42 on behalf of DFO.

3 Information Request Comments

IR Source	DFO Fisheries Protection Program (DFO-FPP)
IR Number	1
IR Directed To	Agnico Eagle Mines Ltd. (AEM)
Subject/Topic	Haul Road Expansion
References	<p>Whale Tail Pit Expansion Project FEIS Addendum (December 2018):</p> <ul style="list-style-type: none"> ▪ <i>Section 1.2.6.1 Water Management Infrastructure, p. 24</i> ▪ <i>Section 6.1.2.1.3 Water Quality and Fish and Fish Habitat, p. 187</i> <p>Appendix 1-B: Addendum Design Drawings/ Conceptual Layouts (December 2018)</p> <p>Appendix 8.C.1: Whale Tail Pit Haul Road Management Plan Version 2 (December 2018)</p>
Issue/Concern	<p>AEM is proposing to widen the haul road from 9.5m to 15m to accommodate the Expansion Project (FEIS Addendum, p. 187). AEM indicated that “...<i>the haul road (i.e., bridges and culverts) have already been assessed and construction is underway under existing authorization. If necessary, to support access road development additional authorizations may be required for the proposed expansion</i>” (FEIS Addendum, p. 24). AEM has indicated that they received a ‘Letter of Advice (LOA) for fish habitat’ on the Whale Tail Pit Haul Road (DFO File No. 11-HCAA-CA6-00006) (Appendix 8.C.1, p. 12). However, DFO-FPP notes that a DFO LOA was only issued for the Amaruq Exploration Road dated March 14, 2016.</p> <p>Although AEM has indicated their intent to upgrade the haul road from 9.5m to 15m wide, DFO-FPP is not clear which existing culverts AEM is proposing to upgrade, or if in addition to upgrades new culverts will also be installed for the widening of the haul road. DFO-FPP notes that any upgrades to existing culverts or watercourse crossings that result in an additional footprint below the High Water Mark (HWM), and/or the installation of new culverts/ watercourse crossings will require an assessment of impacts to fish and fish habitat, which will require further review by DFO-FPP.</p> <p>DFO-FPP also notes that AEM has provided ‘typical cross road widening’ and ‘typical cross-section’ culvert installation details in Appendix 1-B, rather than providing the detailed design drawing for each culvert. It is currently also unclear what information (e.g.</p>

	hydrology, flows, velocities, fish species swimming speeds) was used in the culvert sizing calculations to ensure fish passage is maintained. DFO-FPP notes that culverts and water crossings need to be appropriately sized to enable fish passage for all fish species within the system in order to prevent serious harm to fish.
Recommendation/Request	<p>DFO-FPP requests that AEM:</p> <p>1.1 Provide the total number of existing culverts and new culverts, and their locations that are required for the haul road expansion from 9.5m to 15m wide. The information should be provided in a table format listing all culverts, culvert details (e.g. length, width in metres), associated water crossings (name/ID, and location), and fish and fish habitat information.</p> <p>1.2 Provide the calculations and baseline information (e.g. velocity, fish swimming speed) that were used to inform the sizing of the proposed/ upgraded culvert(s) to ensure adequate velocities for fish passage during both high and low flows. The response should also include the hydraulic calculations which show that the capacity of the culverts can adequately handle peak flows.</p>

IR Source	DFO Fisheries Protection Program (DFO-FPP)
IR Number	2
IR Directed To	Agnico Eagle Mines Ltd. (AEM)
Subject/Topic	New Esker/Quarry Sites
References	<p>Whale Tail Pit Expansion Project FEIS Addendum (December 2018):</p> <ul style="list-style-type: none"> ▪ <i>Section 1.2.8 Haul Roads, All-Weather Roads, and Winter Roads, p. 25</i> ▪ <i>Table 1.2-3: Quarries/Eskers for the Expansion of the Haul Road, p. 26</i> <p>Appendix 1-B: Addendum Design Drawings /Conceptual Layouts (December 2018):</p> <ul style="list-style-type: none"> ▪ <i>Figure B-1. Quarry Site Location Plan</i> <p>Appendix 8.C.1: Whale Tail Pit Haul Road Management Plan (December 2018):</p> <ul style="list-style-type: none"> ▪ <i>Figure 1.2 Whale Tail Pit Haul Road and location of existing and proposed borrow pits and quarries, p. 10</i>
Issue/Concern	AEM lists four new (unpermitted) esker/quarry sites that will be required for the expansion of the haul road (km 2.5, km 8, km 40.4, and km 53). However, DFO-FPP is uncertain whether access roads will

	be required for new esker/quarry sites, and if so, whether the access roads cross fish-bearing watercourses.
Recommendation/Request	DFO-FPP requests AEM confirm whether or not the new locations of the four new esker/quarry sites will require the construction of new site access roads over fish-bearing watercourses.

IR Source	DFO Fisheries Protection Program DFO-FPP)
IR Number	3
IR Directed To	Agnico Eagle Mines Ltd. (AEM)
Subject/Topic	Fish-Out Plan
References	Whale Tail Pit Expansion Project FEIS Addendum (December 2018): <ul style="list-style-type: none"> ▪ <i>Fish-Out, p. 269-270</i>
Issue/Concern	<p>AEM states: “<i>The Final Fish-Out Work Plan may include a fish salvage (or transfer) to mitigate effects to fish mortality. As done for Mammoth and Whale Tail lakes, fish-out plans will be developed for lakes A53, A47, and A49</i>” (FEIS Addendum, p. 269 & 270).</p> <p>For the regulatory phase of the review, DFO-FPP will require AEM to provide an updated fish-out work plan, which should incorporate lessons learned from the fish-out of the North Basin of Whale Tail Lake. This will help to ensure the fish-out is designed to effectively maximize the recovery of fishes (transfer or distribution) while maintaining the scientific integrity of the biological data collected as part of the process.</p>
Recommendation/Request	Should the Expansion Project be approved by the NIRB, DFO-FPP requests that, for the regulatory phase of the review, AEM provide an updated fish-out plan for the waterbodies affected by the Expansion Project. The updated fish-out plan should incorporate lessons learned from the Whale Tail Lake North Basin fish-out, and should include, but is not limited to, the design/method of the fish-out, number(s) and duration(s) of net sets, types of nets and calculations to be used for population estimates.

IR Source	DFO Fisheries Protection Program (DFO-FPP)
IR Number	4
IR Directed To	Agnico Eagle Mines Ltd. (AEM)
Subject/Topic	Fisheries Baseline Information
References	<p>Whale Tail Pit Expansion Project FEIS Addendum (December 2018):</p> <ul style="list-style-type: none"> ▪ <i>Section 6.1.1 Valued Components, p. 183</i> <p>Appendix 6.-L: Addendum Fish Capture Data</p>

	Appendix 8-E.4: Conceptual Whale Tail Pit Expansion Offsetting Plan (December 2018), p. 14
Issue/Concern	<p>AEM indicated that additional fish baseline studies were completed in 2018 via field investigations. For example: <i>“Recently completed baseline studies have confirmed that the distribution of Arctic Grayling in the project area does not extend into upper watershed areas where the proposed Expansion Project will be developed”</i> (FEIS Addendum, p. 185), and <i>“Burbot and slimy sculpin were captured in Lake A53, and slimy sculpin were captured in Lake A49 for the first time in 2018”</i> (Appendix 8-E.4, p. 14).</p> <p>DFO-FPP notes that AEM has not included 2018 field investigations in Appendix 6.-L: Addendum Fish Capture Data.</p>
Recommendation/Request	DFO-FPP recommends that the proponent update the baseline information to contain the additional fish sampling conducted in 2018 for the Expansion Project.

IR Source	DFO Fisheries Protection Program (DFO-FPP)
IR Number	5
IR Directed To	Agnico Eagle Mines Ltd. (AEM)
Subject/Topic	Fish and Fish Habitat Losses Calculation
References	<p>Whale Tail Pit Expansion Project FEIS Addendum (December 2018):</p> <ul style="list-style-type: none"> ▪ <i>Section 1.2.3 Overburden and Waste Rock Disposal, p. 19</i> ▪ <i>Section 6.5.4.2.2 Results – Habitat Losses, p. 266 – 270</i> ▪ <i>Figure 1.2-1 Whale Tail Pit – Expansion Project Site Layout, p. 14</i> ▪ <i>Figure 1.10-2 Whale Tail Pit – Expansion Project Alternative Discharge Locations and Road Routing, p. 42</i> ▪ <i>Table 6.5-6 Waterbody Habitat Losses as Result of the Expansion Project, p. 267</i>
Issue/Concern	<p>AEM has provided an assessment of habitat losses associated with the Whale Tail Pit Expansion Project. However, DFO-FPP notes inconsistencies within and among the provided maps, and notes the following uncertainties requiring further clarification:</p> <p>1) The increased footprint size (in hectares) for the proposed open pit expansion in the North Basin of Whale Tail Lake in the FEIS Addendum is not clear. DFO-FPP needs to obtain a quantification of the expanded footprint for the open pit expansion, and confirmation that there are no additional ponds and/or streams that are affected by the open pit expansion, as Figure 1.2-1 Site Layout (p. 14) does not clearly show if additional ponds and/or streams are affected. This information is important to ensure that serious harm to fish and</p>

	<p>significant adverse affects are currently accounted for, notably with regards to offsetting.</p> <p>2) The new IVR Waste Rock Storage Facility (WRSF) and the new IVR Pit footprints “[...] will completely overlap lakes A51 and A52, Pond A-P21, and streams A51-A50 and A52-A51” (FEIS Addendum, p. 268). However, in Table 6.5-6: Waterbody Habitat Losses as a Result of the Expansion Project (p. 267) does not mention Lake A52.</p> <p>3) Figure 1.2-1 (p. 14) shows pond A-P10, but it is difficult to determine if this pond is connected to any surrounding streams, ponds or lakes. This information is important to ensure that an appropriate fish and fish habitat assessment of the impacts around pond A-P10 has been conducted, as AEM indicated that “[t]he Whale Tail WRSF is proposed to be expanded vertically and horizontally to the southeast to accommodate an additional 91.9 Mt” (FEIS Addendum, p. 19).</p> <p>4) It is unclear if Lake A53 and the unidentified waterbody east of Lake A53 are connected and are part of the same lake. In Figure 1.2-1 (p. 14), it seems that the IVR Attenuation pond will impact Lake A53 and the unidentified waterbody east of Lake A53; both are shown as separate lakes. However, in Figure 1.10-2 (p. 42), it appears Lake A53 is connected to the unidentified waterbody. DFO-FPP is uncertain that figures accurately reflect the layout of these waterbodies and their relation to proposed activities.</p> <p>It is important that uncertainties regarding habitat losses are accurately accounted for and understood as in order for DFO-FPP adequately assess the impact assessment.</p>
Recommendation/Request	<p>DFO-FPP recommends that AEM:</p> <p>5.1 Provide information on the footprint increase (hectares) for the open Whale Tail Pit, and confirm that no additional ponds and/or streams are affected by the pit expansion.</p> <p>5.2 Provide updated information for habitat loss associated Lake A52 in Table 6.5-6: Waterbody Habitat Losses as a Result of the Expansion Project (p. 267).</p> <p>5.3 Clarify whether Lake A54 will be impacted by the IVR pit and/or the IVR WRSF.</p> <p>5.4 Clarify whether A-P10 is connected to surrounding streams,</p>

	<p>ponds or lakes. If so, clarify that AEM accounted for these habitat losses.</p> <p>5.5 Provide updated information and figures in regards to the unidentified waterbody east of A53, and if this waterbody is connected to, or part of Lake A53. This includes information on the fish bearing status.</p> <p>5.6 If Information Requests 5.1 to 5.5 indicate additional unaccounted habitat losses, these habitat losses will need to be accounted for in an updated Appendix 8-E.4: Conceptual Whale Tail Pit (December 2018).</p>
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IR Source	DFO Fisheries Protection Program (DFO-FPP)
IR Number	6
IR Directed To	Agnico Eagle Mines Ltd. (AEM)
Subject/Topic	South Basin Whale Tail Water Level
References	<p>Whale Tail Pit Expansion Project FEIS Addendum (December 2018):</p> <ul style="list-style-type: none"> ▪ <i>Section 1.2.6.2 Effluent Treatment, p. 19</i> ▪ <i>Section 1.2.6.3 Dewatering, p. 24</i>
Issue/Concern	<p>AEM indicated that for the Expansion Project, the treated water will be discharged via diffuser into Mammoth Lake or the Whale Tail Lake South Basin. <i>“Any water requiring treatment will be pumped to the water treatment plant(s) prior to discharge through the diffuser in Mammoth Lake or through a diffuser in Whale Tail Lake (South Basin) or other alternatives”</i> (FEIS Addendum, p. 24). The water level for the South Basin will also increase due to dewatering for the Expansion Project. <i>“Dewatering for the Expansion Project where applicable is planned for release entirely through Whale Tail Lake (South Basin)”</i> (FEIS Addendum, p. 24).</p> <p>DFO-FPP is unclear to what extent water level will increase for the South Basin of the Whale Tail Lake due to the proposed discharge of both treated and dewatering waters, and if additional surrounding streams, ponds and lakes will also be affected by what has been approved for the Whale Tail Pit Project. It is important for DFO-FPP to understand the total amount of change in the water level as a result of the Expansion Project, and to understand what surrounding streams, pond and lake habitats will be impacted by this change in water level. This information will allow DFO-FPP to determine if impacts have been adequately accounted for.</p>
Recommendation/Request	DFO-FPP requests that AEM provide information on the water level increase, including: the change in surface area (hectares) for the

	South Basin of the Whale Tail Lake, and if any additional surrounding streams, ponds and lakes will be affected, and to what extent.
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IR Source	DFO Fisheries Protection Program (DFO-FPP)
IR Number	7
IR Directed To	Agnico Eagle Mines Ltd. (AEM)
Subject/Topic	Whale Tail Pit - Fish Habitat Offset Monitoring Plan
References	<p>Whale Tail Pit Expansion Project FEIS Addendum (December 2018):</p> <ul style="list-style-type: none"> ▪ <i>Section 6.5.9 Monitoring and Follow-up, p. 282</i> <p>Appendix 8-E.4: Conceptual Whale Tail Pit Expansion Offsetting Plan (December 2018)</p>
Issue/Concern	AEM listed monitoring plans in section 6.5.9 Monitoring and Follow-up (p. 282) that are applicable to fish and fish habitat. DFO-FPP notes that the list does not include the update for the Whale Tail Pit – Fish Habitat Offset Monitoring Plan for the Expansion Project. This plan should accompany Appendix 8-E.4: Conceptual Whale Tail Expansion Offsetting Plan (December 2018), as it will ensure monitoring will be in place for the offsetting of the Expansion Project.
Recommendation/Request	DFO-FPP requests that AEM provide an updated Whale Tail Pit – Fish Habitat Offset Monitoring Plan for the Expansion Project.

4 Summary of Requests

IR 1		
		<p>DFO-FPP requests that AEM:</p> <p>1.1 Provide the total number of existing culverts and new culverts, and their locations that are required for the haul road expansion from 9.5m to 15m wide. The information should be provided in a table format listing all culverts, culvert details (e.g. length, width in metres), associated water crossings (name/ID, and location), and fish and fish habitat information.</p> <p>1.2 Provide the calculations and baseline information (e.g. velocity, fish swimming speed) that were used to inform the sizing of the proposed/ upgraded culvert(s) to ensure adequate velocities for fish passage during both high and low flows. The response should also include the hydraulic calculations which show that the capacity of the culverts can adequately handle peak flows.</p>
IR 2		
		DFO-FPP requests AEM confirm whether or not the new locations of the four

		new esker/quarry sites will require the construction of new site access roads over fish-bearing watercourses.
IR 3		
		Should the Expansion Project be approved by the NIRB, DFO-FPP requests that, for the regulatory phase of the review, AEM provide an updated fish-out plan for the waterbodies affected by the Expansion Project. The updated fish-out plan should incorporate lessons learned from the Whale Tail Lake North Basin fish-out, and should include, but is not limited to, the design/method of the fish-out, number(s) and duration(s) of net sets, types of nets and calculations to be used for population estimates.
IR 4		
		DFO-FPP recommends that the proponent update the baseline information to contain the additional fish sampling conducted in 2018 for the Expansion Project.
IR 5		
		<p>DFO-FPP recommends that AEM:</p> <p>5.1 Provide information on the footprint increase (hectares) for the open Whale Tail Pit, and confirm that no additional ponds and/or streams are affected by the pit expansion.</p> <p>5.2 Provide updated information for habitat loss associated Lake A52 in Table 6.5-6: Waterbody Habitat Losses as a Result of the Expansion Project (p. 267).</p> <p>5.3 Clarify whether Lake A54 will be impacted by the IVR pit and/or the IVR WRSF.</p> <p>5.4 Clarify whether A-P10 is connected to surrounding streams, ponds or lakes. If so, clarify that AEM accounted for these habitat losses.</p> <p>5.5 Provide updated information and figures in regards to the unidentified waterbody east of A53, and if this waterbody is connected to, or part of Lake A53. This includes information on the fish bearing status.</p> <p>5.6 If Information Requests 5.1 to 5.5 indicate additional unaccounted habitat losses, these habitat losses will need to be accounted for in an updated Appendix 8-E.4: Conceptual Whale Tail Pit (December 2018).</p>
IR 6		
		DFO-FPP requests that AEM provide information on the water level increase, including: the change in surface area (hectares) for the South Basin of the Whale Tail Lake, and if any additional surrounding streams, ponds and lakes will be affected, and to what extent.

IR 7		
		DFO-FPP requests that AEM provide an updated Whale Tail Pit – Fish Habitat Offset Monitoring Plan for the Expansion Project.