



## **PARAGRAPH 35(2)(b) FISHERIES ACT AUTHORIZATION**

### **Authorization issued to**

Agnico Eagle Mines Ltd. (*hereafter referred to as the "Proponent"*)

Attention to: Jamie Quesnel  
Environnemental Superintendant  
145 King Street East, Suite 400  
Toronto, Canada  
M5C 2Y7

### **Location of Proposed Project**

Nearest community (city, town, village): Baker Lake  
Municipality, district, township, county: Kivalliq Region  
Province: Nunavut  
Name of watercourse, waterbody: Phaser Lake  
Longitude and latitude, UTM Coordinates: 6504' 13.36"N, 9600' 43.30"W; 640506.07m E, 7219673.42m N

### **Description of Proposed Project**

The proposed project of which the work, undertaking or activity authorized is a part involves:

Expansion of the existing Vault Pit operation at the Meadowbank Gold Mine into the adjacent Phaser Lake to include Phaser Pit and Baby Phaser Pit. This expansion will be open pit mining. The project would require Phaser Lake to be fished out and dewatered (fish and water transferred to Wally Lake) prior to pit construction. Upon completion of mining at Vault Pit and Phaser Pits, the Proponent intends to breach a dike between Vault Lake basin and Wally Lake to allow water to re-flood the dewatered basins. As a component of this closure scenario, the proponent intends to re-establish a historic connection between Vault and Phaser Lakes (Phaser Lake is currently hydraulically isolated). Overall, activities within Phaser Lake are anticipated to occur over approximately 10 years, or longer, dependent upon re-flooding water quality results at closure.

### **Description of Authorized work(s), undertaking(s) or activity(ies) likely to result in serious harm to fish**

The work(s), undertaking(s), or activity(ies) associated with the proposed project described above, that are likely to result in serious harm to fish, are:

- The de-watering of the 27ha Phaser Lake while conducting a fish-out and transfer to Wally Lake; and,

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- The mining of the lake basin creating two pits, Phaser Pit and Baby Phaser Pit

**The serious harm to fish likely to result from the proposed works, undertakings, or activities, and covered by this authorization includes:**

The permanent destruction of approximately 27 hectares (8.25 Habitat Units) of fish habitat resulting from dewatering, and mining activities including:

- **Death of fish:** Despite best efforts to successfully transfer all fish from Phaser Lake to Wally Lake, the process will result in mortalities.
- **Permanent destruction:** The removal of Phaser Lake water and basin for the duration of mining activities until successful water quality is restored upon re-flooding means that the Phaser Lake fish population can no longer rely upon that habitat for spawning, nursery, rearing or food supply in order to carry out their life processes.

### **Conditions of Authorization**

The above described work, undertaking or activity that is likely to result in serious harm to fish must be carried on in accordance with the following conditions.

1. **Conditions that relate to the period during which the work, undertaking or activity that will result in serious harm to fish can be carried on:**

The work, undertaking or activity that results in serious harm to fish is authorized to be carried on during the following period:

From: Date of Issuance

To: July 1, 2027

If the Proponent cannot complete the work, undertaking or activity during this period, Fisheries and Oceans Canada (DFO) must be notified in advance of the expiration of the above time period. DFO may, where appropriate, provide written notice that the period to carry on the work, undertaking or activity has been extended.

The periods during which other conditions of this authorization must be complied with are provided in their respective sections below. DFO may, where appropriate, provide written notice that these periods have been extended, in order to correspond to the extension of the period to carry on a work, undertaking, or activity.

2. **Conditions that relate to measures and standards to avoid and mitigate serious harm to fish**

- 2.1 Sediment and erosion control: Sediment and erosion control measures must be in place and shall be upgraded and maintained, such that release of sediment is avoided at the location of the authorized work, undertaking, or activity.

- 2.2 List of measures and standards to avoid and mitigate serious harm to fish:

- 2.2.1 The Proponent shall adhere to the *General Fish-out Protocol for Lakes and Impoundments in the Northwest Territories and Nunavut* (Tyson et. al. 2011)

- 2.2.2 The Proponent shall adhere to the *Freshwater Intake End-of-Pipe Fish Screen Guideline* (Fisheries and Oceans 1995)

- 2.2.3 The Proponent shall adhere to the *Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters* (Wright and Hopky 1998); and, as per Nunavut Impact Review Board condition 85, the Proponent shall develop a blasting program in consultation with DFO to ensure effects on fish and fish habitat are minimized.
- 2.2.4 The Proponent shall adhere to the *DFO Protocol for Winter Water Withdrawal* (Fisheries and Oceans 2005).
- 2.3 Works shall be halted if monitoring required in condition 3 below indicates that the measures and standards to avoid and mitigate serious harm to fish are not successful.
- 2.4 Measures and standards to avoid and mitigate serious harm to fish shall be implemented at the start of the project.
3. **Conditions that relate to monitoring and reporting of measures and standards to avoid and mitigate serious harm to fish adapted from the Nunavut Impact Review Board's revised Project Certificate No.004 dated May 2016**
- 3.1 Monitoring of avoidance and mitigation measures: The Proponent shall monitor the implementation of avoidance and mitigation measures referred to in section 2 of this authorization and report to DFO, by March 31 annually and indicate whether the measures and standards to avoid and mitigate serious harm to fish were conducted according to the conditions of this authorization. This shall be done, by:
- 3.1.1 Demonstration of effective implementation and functioning: Providing dated photographs and inspection reports to demonstrate effective implementation and functioning of mitigation measures and standards described above to limit the serious harm to fish to what is covered by this authorization.
- 3.1.2 Contingency measures: Providing details of any contingency measures that were followed, to prevent impacts greater than those covered by this authorization in the event that mitigation measures did not function as described.
- 3.2 Other monitoring and reporting conditions:
- 3.2.1 As per the Nunavut Impact Review Board condition 53, the Proponent shall consult with the Baker Lake Hunter's and Trapper's Organization, and DFO, on the development of a Fish Habitat Monitoring Plan, including augmenting baseline fisheries data in the period prior to operation, and with a clear objective of demonstrating the success of the Offsetting Plan.
- 3.2.2 Submission of fish-out reports: The Proponent shall submit fish-out reports in the format requested by DFO, including photographs of the fish-out in Phaser Lake and transfer to Wally Lake as per the frequency outlined in the *General Fish-out Protocol for Lakes and Impoundments in the Northwest Territories and Nunavut*. As per the Nunavut Impact Review Board Condition 49, the reporting of fish-out data shall be done in consultation with elders and the Baker Lake Hunter's and Trapper's Organization. This Plan shall optimize the acquisition of northern fisheries science and augment baseline fisheries data to support monitoring programs and the final design of fish habitat offsetting features.
4. **Conditions that relate to the offsetting of the serious harm to fish likely to result from the authorized work, undertaking or activity**
- 4.1 DFO holds a Letter of Credit for \$1,743,538.86 for the Meadowbank Mine Vault Expansion Project into Phaser Lake: DFO may draw upon funds available to DFO as the beneficiary of the letter of

credit provided to DFO as part of the application for this authorization, to cover the costs of implementing the offsetting measures required to be implemented under this authorization, including the associated monitoring and reporting measures included in section 5, in instances where the Proponent fails to implement these required measures.

- 4.2 Scale and description of offsetting measures to be undertaken within the re-flooded Phaser Lake basin:
- The Proponent shall backfill the former lake basin and Phaser Pit with non-acid generating waste rock to create a mixed substrate boulder garden basin and reduce the pit depth;
  - Cap Phaser Pit and Baby Phaser Pit with non-acid generating rock to create shoals,
  - Scarify the former haul road(s) within the lake basin to serve as shoal habitat,
  - Convert approximately 3.94ha of land to lake by expanding the surface area of Phaser Lake,
  - And, re-establish a historic access channel between Vault Lake and Phaser Lake to introduce Arctic Char if no Arctic Char are caught in the fish out of Phaser Lake.
  - Offsetting measures shall be carried out in accordance with the measures set out in the Proponent's Draft Offsetting Plan dated February 2016.
- 4.3 Offsetting criteria to assess the implementation and effectiveness of the offsetting measures: All fish habitat offsetting measures shall be completed and functioning according to the criteria below:
- All offsetting features are to be constructed by 2018-2019, with re-flooding of the former lake basin by 2027.
  - Water quality in the re-flooded lake basin is suitable for aquatic biota, including periphyton monitoring
  - The offsetting features (shoals, boulder gardens) are functioning as intended (utilized by fish)
  - The fish introduced into the re-flooded lake are healthy (safe for consumption).
  - Offsetting measures shall be carried out in accordance with the measures set out in the Proponent's Draft Offsetting Plan dated February 2016.
- 4.4 Contingency measures: If the results of monitoring as required in section 5 indicate that the offsetting measures are not completed by the date specified and/or are not functioning according to the above criteria in 4.3, the Proponent shall give written notice to DFO and shall discuss the implementation of the draft contingency measures and associated monitoring measures, as contained within the Proponent's Draft Offsetting Plan dated February 2016.
- 4.4.1 Scale and description of conceptual contingency measures:
- Improvement of access for Arctic Char and Lake Trout between Wally Lake and Wally 4
  - Construction of Arctic Grayling spawning pads
  - Creation of additional finger dikes
- 4.4.2 Monitoring measures to ensure offsetting contingency is completed and/or functioning as required:
- Limnological and water quality monitoring
  - Interstitial water quality monitoring on constructed features
  - Periphyton monitoring
  - Fish use monitoring via field surveys including angling, underwater camera, and netting)
- 4.5 The Proponent shall not carry on any work, undertaking or activity that will adversely disturb or impact the offsetting measures.
- 4.6 Other conditions related to offsetting:

- Potential offsetting gains will not be allocated upon the as-is construction state. Gains will be evaluated via monitoring upon the re-flooding of the lake basin, establishment of suitable water quality and introduction of fish.
- As per Nunavut Impact Review Board condition 14, the Proponent shall not remove the dewatering dikes until the quality of water contained within the re-flooded lake basin is of sufficient quality to meet receiving environment discharge criteria as established by the Nunavut Water Board or other responsible parties.

**5. Conditions that relate to monitoring and reporting of implementation of offsetting measures (described above in section 4):**

**5.1 Schedule and criteria: The Proponent shall conduct monitoring of the implementation of offsetting measures according to the approved timeline and criteria below:**

**5.1.1** List of timeline and monitoring and reporting criteria: According to the schedule within the Meadowbank Gold Mine Draft Habitat Compensation Monitoring Plan March 2016.

**5.2 List of reports to be provided to DFO: The Proponent shall report to DFO on whether the offsetting measures were conducted according to the conditions of this authorization by providing the following:**

**5.2.1** Habitat Compensation Monitoring Report including a photographic record to be submitted directly to DFO annually by March 31, until DFO indicates this requirement has been met.

**Authorization Limitations and Application Conditions**

The Proponent is solely responsible for plans and specifications relating to this authorization and for all design, safety and workmanship aspects of all the works associated with this authorization.

The holder of this authorization is hereby authorized under the authority of Paragraph 35(2)(b) of the *Fisheries Act*, R.S.C., 1985, c.F. 14 to carry on the work(s), undertaking(s) and/or activity(ies) that are likely to result in serious harm to fish as described herein. This authorization does not purport to release the applicant from any obligation to obtain permission from or to comply with the requirements of any other regulatory agencies.

This authorization does not permit the deposit of a deleterious substance in water frequented by fish. Subsection 36(3) of the *Fisheries Act* prohibits the deposit of any deleterious substances into waters frequented by fish unless authorized by regulations made by Governor in Council.

This authorization does not permit the killing, harming, harassment, capture or taking of individuals of any aquatic species listed under the *Species at Risk Act* (SARA) (s. 32 of the SARA), or the damage or destruction of residence of individuals of such species (s. 33 of the SARA) or the destruction of the critical habitat of any such species (s. 58 of the SARA).]

At the date of issuance of this authorization, no individuals of aquatic species listed under the *Species at Risk Act* (SARA) were identified in the vicinity of the authorized works, undertakings or activities.]

The failure to comply with any condition of this authorization constitutes an offence under Paragraph 40(3)(a) of the *Fisheries Act* and may result in charges being laid under the *Fisheries Act*.

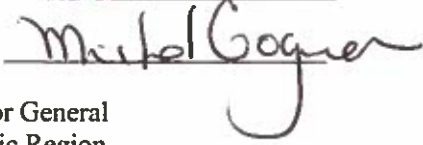
This authorization must be held on site and work crews must be made familiar with the conditions attached.

This authorization cannot be transferred or assigned to another party. If the work(s), undertaking(s) or activity(ies) authorized to be conducted pursuant to this authorization are expected to be sold or transferred,

or other circumstances arise that are expected to result in a new Proponent taking over the work(s), undertaking(s) or activity(ies), the Proponent named in this authorization shall advise DFO in advance.

Date of Issuance: JUL 27 2016

Approved by:  
David Burden  
Regional Director General  
Central and Arctic Region  
Fisheries and Oceans Canada

A handwritten signature in black ink, appearing to read "Michel Gagner", is written over a horizontal line.