



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

Authorization issued to

Indigenous and Northern Affairs Canada
(hereafter referred to as the "Proponent")

Attention to:

Marie-France Therrien
Regulatory Manager, Faro Mine Remediation Project
Indigenous and Northern Affairs Canada
25 Rue Eddy, 10IEME ÉTAGE
Gatineau, Québec K1A 0H4

Location of Proposed Project

Nearest community (city, town, village): Faro, Yukon
Municipality, district, township, county: N/A
Province: Yukon
Name of watercourse, waterbody: North Fork Rose Creek
Longitude and latitude: 62°20'39.11"N, 133°21'14.30"W

Description of Proposed Project

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

- The proposed project is required to mitigate ongoing zinc loading and toxicological risks to fish in North Fork Rose Creek (NFRC). Construction of a 2.2 km re-aligned, engineered stream to divert seepage water away from the mine site and waste rock dump is proposed.

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:

- Diversion of 2.2 km of existing North Fork Rose Creek into a constructed channel.

The serious harm to fish likely to result from the proposed work(s), undertaking(s), or activity(ies), and covered by this authorization includes

- The project will result in serious harm due to the permanent alteration of 29,892 m² of natural stream habitat in North Fork Rose Creek.

Conditions of Authorization

The above described work(s), undertaking(s) or activity(ies) 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(s), undertaking(s) or activity(ies) that will result in serious harm to fish can be carried on

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

From: August 1, 2018 to October 1, 2019

If the Proponent cannot complete the work(s), undertaking(s) or activity(ies) 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 measures must be in place and shall be upgraded and maintained, such that release of sediment is avoided at and downstream of the location of the authorized work(s), undertaking(s), or activity(ies).
- 2.2 Installation of diversion structure(s) within North Fork Rose Creek and diversion of flows (during construction and operation) to or from the creek shall not occur between April 15 and July 1.
- 2.3 Retain a qualified environmental professional to ensure appropriate protocols are applied, and applicable permits for relocating fish are obtained and to capture any fish trapped within an isolated/enclosed area at the work site, or area from which water is to be diverted, and safely relocate them to an appropriate location. Fish may need to be relocated again, should flooding occur on the site.
- 2.4 A qualified environmental monitor (EM) shall monitor the implementation of avoidance and mitigation measures to prevent serious harm.
- 2.5 The EM will be onsite during instream works.
- 2.6 The EM will monitor the project work area for fish presence and will oversee the implementation, monitoring and maintenance of mitigation measures to prevent unauthorized serious harm, including death of fish, from occurring.
- 2.7 Measures and standards to avoid and mitigate serious harm to fish shall be implemented at the outset of construction and maintained until construction is completed.
- 2.8 Contingency measures shall be put in place if monitoring required in condition 3 below indicates that the measures and standards to avoid and mitigate serious harm to fish are not successful.

3. Conditions that relate to monitoring and reporting of measures and standards to avoid and mitigate serious harm to fish

- 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 within 90 days of project completion, 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.
- 3.1.3 Other monitoring and reporting conditions: Providing details of the sequence and quality of construction, and 'as-built' engineer drawings of the completed works, that document and summarize the footprint and flow measurements of the completed realigned stream works.

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 Letter of credit: A letter of credit from the Proponent (INAC, Government of Canada) is not required.
- 4.2 Scale and description of offsetting measures: Offsetting measures will follow the design plans and parameters outlined in the Proponent submitted offsetting plan (North Fork Rose Creek Realignment Offsetting Plan, prepared by Minnow Environmental Inc., dated April 2018), and engineer drawings by BGC Engineering. The realigned channel, engineered for water conveyance, is the primary offsetting measure (15,070 m² of offset habitat area). Additional offsetting, including several overwintering and rearing ponds (9,221 m² of offset habitat area) and a culvert replacement (681 m² of offset area) will be constructed. The total offset area is 25,701 m².
- 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:
 - 4.3.1 North Fork Rose Creek Re-alignment Channel: Constructed as documented in the Proponent's Offsetting Plan referred to in condition 4.2, and meets the success metrics described in the Proponent's Offsetting Plan and Monitoring Program;
 - 4.3.2 South Fork Rose Creek Overwintering Ponds : Constructed as documented in the Proponent's Offsetting Plan referred to in condition 4.2, and meets the success metrics described in the Proponent's Offsetting Plan and Monitoring Program;
 - 4.3.3 Unnamed Tributary Connection: Constructed as documented in the Proponent's Offsetting Plan referred to in condition 4.2, and meets the success metrics described in the Proponent's Offsetting Plan and Monitoring Plan;
 - 4.3.4 Offsetting measures shall be completed and functioning by October 1, 2019, as described in the Proponent's Offsetting Plan and Monitoring Plan.
- 4.4 Contingency measures: If the results of monitoring as required in section 5 indicate that the offsetting measures are not functioning according to the above criteria in condition 4.3 and/or are not completed by the date specified in condition 4.3.4, the Proponent shall give written notice to DFO and shall put in place contingency measures and associated monitoring measures to ensure the offsetting is completed and functioning as required by this authorization.
- 4.5 The Proponent shall not carry on any work, undertaking or activity that will adversely disturb or impact the offsetting measures.

5. **Conditions that relate to monitoring and reporting of implementation of offsetting measures (described above in section 4):**
- 5.1 Schedule(s) and criteria: The Proponent shall conduct monitoring of the implementation of offsetting measures according to the approved timeline and criteria below:
 - 5.2 The Proponent shall provide DFO a post-construction report, within 6 months of completion of offsetting measures, documenting that the offset measures were constructed according to the conditions of this authorization. The report shall include the following:
 - 5.2.1 Dated representative photographs showing habitat values, physical stability and functionality.
 - 5.2.2 An as-built survey of the constructed North Fork Rose Creek re-alignment channel and offsetting measures that documents the areal extent and habitat features.
 - 5.3 The Proponent shall conduct effectiveness monitoring of the offset measures in years 1, 2, 3, 6 and 9 post-construction, according to the methods described in the Proponent submitted offsetting plan (North Fork Rose Creek Realignment Offsetting Plan, prepared by Minnow Environmental Inc., dated April 2018).
 - 5.4 The Proponent shall submit an effectiveness monitoring report to DFO for each monitoring year.
 - 5.5 Each effectiveness monitoring report shall include the following:
 - 5.5.1.1 Photographic assessment of the offsetting measures demonstrating habitat values, fish use, physical stability and functionality. Photographs of offsetting measures are to be taken from the same representative locations during each monitoring year.
 - 5.5.1.2 Identification of any functional concerns with the offsetting measures and descriptions of any remedial measures taken.
 - 5.5.1.3 The results of fish sampling activities conducted to demonstrate fish utilization, species assemblage and population estimates for target species (e.g., Arctic Grayling).
 - 5.5.1.4 All other site-specific monitoring metrics outlined in the Proponent submitted Offsetting Plan and Monitoring Program.
 - 5.6 The final monitoring report (year 9) will include an evaluation of whether the offsetting works undertaken counterbalanced the authorized serious harm to fish.
 - 5.7 Monitoring reports shall be submitted by March 31st following each monitoring season to ReferralsPacific@dfo-mpo.gc.ca with reference to DFO file # 18-HPAC-00106.

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.

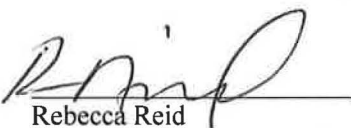
This authorization does not permit the killing, harming, harassment, capture or taking of individuals of any aquatic species listed under the *Species at Risk Act* (SARA) (s. 32 of the SARA), or the damage or destruction of residence of individuals of such species (s. 33 of the SARA) or the destruction 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 26 2018

Approved by: 
Rebecca Reid
Regional Director General
Pacific Region, Fisheries and Oceans Canada