



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Eastern Arctic Area

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April 11, 2007

Your file

Votre référence

Our file

Notre référence

NU-03-0109

Meadowbank Mining Corporation
c/o Mr. Craig Goodings
Vice-President Environmental Affairs
Cumberland Resources Limited
#950 - 505 Burrard Street
Box 72, One Bentall Centre
Vancouver, B.C V7X 1M4

Dear Mr. Goodings:

SUBJECT: Authorization for the harmful alteration, disruption or destruction of fish habitat pursuant to subsection 35(2) of the *Fisheries Act*

The harmful alteration, disruption or destruction of fish habitat arising from the infilling of fish habitat as a result of bridge construction at five (5) river crossings along the All-Weather-Private Access Road (AWPAR) connecting the Hamlet of Baker Lake to the Meadowbank mine property is hereby authorized pursuant to subsection 35(2) of the *Fisheries Act*. This Authorization shall be conditional upon implementation of mitigation and compensation measures specified on the attached document.

The environmental impacts of this undertaking have been reviewed by the Department of Fisheries and Oceans in accordance with the *Canadian Environmental Assessment Act*. This review concluded that the project is not likely to cause significant adverse environmental effects if the mitigation and compensation measures specified are implemented.

Failure to comply with any of the conditions specified on the attached Authorization may result in a contravention of section 35 of the *Fisheries Act*.

NOTE: None of the foregoing should be taken to imply Authorization of this undertaking in accordance with any section of the *Fisheries Act* **other** than section 35. Also note that Authorization under the *Fisheries Act* does not release the proponent from the requirements of any other federal, provincial or municipal legislation.

Please contact Tania Gordanier at (867) 979-8007 or by fax at (867) 979-8039 should you have any questions or require additional information.

Sincerely,

Original Signed by:

Keith Pelley
Acting Area Director
Eastern Arctic Area
Fisheries and Oceans Canada



AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT

Authorization issued to:

Cumberland Resources Limited, sole proprietor of the Meadowbank Gold Corporation

Mr. Craig Goodings

Vice-President Environmental Affairs
Cumberland Resources Limited
#950 - 505 Burrard Street
Box 72, One Bentall Centre
Vancouver, B.C V7X 1M4

Tel: (604) 608-2557

Fax: (604) 608-2559

Location of Project

The water crossings associated with the All-Weather-Private-Access-Road (AWPAR) to the Meadowbank Gold Corporation mine project are located in the Kivalliq Region of Nunavut, north of the hamlet of Baker Lake. Specifically the five (5) water crossings, along the 115 km long AWPAP that connects the Hamlet of Baker Lake to the mine property, are located within UTM Zone 14, at: R2 (643780E, 7143375N), R6 (638095E, 7155812N), R9 (625562E, 71733765N), R15 (627469E, 7192063N), and R19 (627718E, 7203855N).

Valid Authorization Period

The valid authorization period for the harmful alteration, disruption or destruction of fish habitat associated with the construction of five (5) watercourse crossings is:

From:
Date of Issuance

To:
December 31, 2007

The valid periods for other conditions of the authorization are as set out below.

Description of Works or Undertakings (Type of work, schedule, etc.)

The harmful alteration, disruption or destruction hereby authorized is the infilling of fish habitat as a result of water crossing construction at five (5) locations (denoted as R02, R06, R09, R15 and R19) along the All-Weather-Private-Access-Road (AWPAR) connecting the Hamlet of Baker Lake to the mine property, affecting a total of 1,430 Habitat Units (HU) of fish habitat on five (5) unnamed watercourses.

Conditions of Authorization

1. The conditions of this Authorization notwithstanding, should the above works or undertakings, due to weather conditions, different soil or other natural conditions, or for any other reason, appear, in the opinion of the Department of Fisheries and Oceans ("DFO") likely to cause greater impacts than the parties previously contemplated, then DFO may direct the Proponent, and its agents, and contractors, to suspend or alter works and activities associated with the project, to avoid or mitigate adverse impacts to fisheries resources. DFO may also direct the Proponent and its agents, and contractors, to carry out at the Proponent's expense any works or activities deemed necessary by DFO to avoid or mitigate further adverse impacts to fisheries resources. In circumstances where DFO is of the view that greater impacts may occur than were contemplated by the parties DFO may also modify or rescind this authorization. If the authorization is to be changed the Proponent will be given an opportunity to discuss any proposed modifications or rescission.
2. Conditions that relate to the Proponent plan:
 - 2.1. Cumberland Resources Limited (the "Proponent") confirms that all plans and specifications relating to this authorization have been duly prepared and reviewed by appropriate professionals working on behalf of the Meadowbank Gold Corporation. Craig Goodings of Cumberland Resources Limited acknowledges that he is solely responsible for all design, safety and workmanship aspects of all the works associated with this Authorization.
 - 2.2. The construction of the five (5) water crossings shall comply with those criteria as identified within this Authorization. Harmful alteration,

disruption or destruction of fish habitat other than that specifically identified within this Authorization is prohibited.

- 2.3. Works and undertakings will be conducted in accordance with the practices outlined in the following reports, and as approved by DFO:
 - 2.3.1. Meadowbank Gold Project No-Net-Loss-Plan (NNLP), Cumberland Resources Limited prepared by Azimuth Consulting Group Incorporated, Randy Baker, dated November 2006.
 - 2.3.2. Design Recommendations for the Proposed Tehek Lake Access Road prepared by Golder Associates Ltd. dated July 7, 2006
 - 2.3.3. Correspondence, Cumberland NNLP AWP/AR DFO Comments – Azimuth Responses, Gary Mann dated February 27, 2007.
 - 2.3.4. The above document(s) and/or drawing(s) are hereafter referred to as the “Plan”. Where contradictions exist, the most recent version shall apply.
3. Conditions that relate to the mitigation of potential harmful alteration, disruption or destruction of fish habitat. The following measures shall be implemented to avoid the unauthorized HADD of fish habitat:
 - 3.1. No in-water work shall occur during critical spawning and rearing periods for any fish species in the affected waterbodies. The timing of any in-water works proposed for the open water season shall be determined by the Proponent and be subject to approval by DFO prior to implementation.
 - 3.2. A qualified biologist or environmental inspector shall be on site during all in-water construction, compensation and restoration works to ensure implementation of the designs as intended in the Plan and conditions of this Authorization.
 - 3.3. All materials and equipment used for the purpose of site preparation and project completion shall be operated and stored in a manner that prevents any deleterious substance (e.g. petroleum products, silt, debris, etc.) from entering the water.
 - 3.3.1. Any stockpiled materials shall be stored and stabilized above the ordinary high water mark of any water body.
 - 3.3.2. Vehicle and equipment re-fuelling and maintenance shall be conducted above the ordinary high water mark of any water body.
 - 3.3.3. Any part of equipment entering the water shall be free of fluid leaks and externally cleaned/degreased to prevent any deleterious substance from entering the water.
 - 3.4. Only clean material free of fine particulate matter shall be placed in the water.
 - 3.5. Material used for habitat compensation features shall not be taken from below the ordinary high water mark or shoreline of any water body.
 - 3.6. Sediment and erosion control measures shall be implemented prior to work, and maintained during the work phases, including decommissioning and restoration phases, to prevent entry of sediment into the water or the movement of re-suspended sediment.
 - 3.6.1. All disturbed areas shall be stabilized upon completion of work and restored to a pre-disturbed state or better.
 - 3.6.2. Sediment and erosion control measures shall be left in place and maintained until all disturbed areas have been stabilized.
4. Conditions that relate to the compensation for the loss of 1,430 Habitat Units (HU) of fish habitat as defined in the Plan.
 - 4.1. The Proponent shall prepare a detailed Compensation Plan, based on the principles outlined in the No-Net-Loss Plan specified in sub-section 2.3.1 above, by May 31, 2007 and submit it for DFO review and approval prior to implementation.
 - 4.2. The detailed Compensation Plan shall describe how a habitat replacement to loss ratio of 1.5:1 will be achieved, and specifically ensure the permanent creation of 2,175 HU upstream of the R02 crossing to compensate for the loss of 1,150 HU at R02; 144 HU at R06; 28 HU at R09; 48 HU at R15 and 16 HU at R19, respectively.
 - 4.3. In addition the Proponent shall prepare and submit for DFO review and approval by May 31, 2007, a detailed decommissioning and restoration plan, including sediment and erosion control measures that shall be implemented, indicating how the five (5) water crossings and their respective floodplains shall be returned to pre-construction condition by restoring the natural hydrology, topography, and riparian vegetation.
5. Conditions that relate to Monitoring.
 - 5.1. A detailed Monitoring Plan shall be developed by the Proponent, based on the principles outlined in the No-Net-Loss Plan specified in sub-section 2.3.1 above, by May 31, 2007 and submitted for DFO review and approval prior to implementation.
 - 5.2. The approved Monitoring Plan shall be implemented annually for the years from 2007 to 2010 inclusive and every other year thereafter

(starting in 2012) until one (1) year after water crossing decommissioning and restoration is completed. The detailed Monitoring Plan shall include, but not be limited to, the following:

- 5.2.1. The stability and successful utilization of all compensation features shall be assessed during the spawning and nursery period for Arctic grayling (*Thymallus arcticus*) according to the schedule in 5.2 above.
- 5.2.2. Monitoring to assess if the installation of crossing structures has adversely affected upstream and downstream fish migration according to the schedule in 5.2 above.
- 5.2.3. If at any time during the monitoring period, compensation features are not functioning as intended, measures shall be identified to reduce the risk of future failure and additional compensation shall be created to meet the No-Net-Loss guiding principle using an adaptive management approach.
- 5.2.4. The Proponent shall engage the local Hunter Trapper Organization(s) in the development, implementation and reporting of annual creel surveys within the water bodies affected by the Plan and report according to the schedule in 5.2 above.
- 5.3. A photographic record of before, during and after construction, during decommissioning and after restoration, showing that all works and undertakings have been completed according to the approved Plan and conditions of this authorization, shall be submitted to the Iqaluit, NU office of the Department of Fisheries and Oceans, Fish Habitat Management, Eastern Arctic Area, on or before, December 31, according to the schedule in 5.2 above.
 - 5.3.1. The photographic record shall include, but not be limited to, a record of the sediment and erosion control measures, compensation measures and upstream and downstream views of the crossings.
 - 5.3.2. The photographs for each pre-construction, during construction, post-construction, decommissioning and post-restoration time periods shall be taken from the same vantage point(s) and general direction.
 - 5.3.3. All photographs shall be clearly labelled as to date and vantage point(s). The photographic vantage point(s) and viewing directions shall be indicated, and clearly indexed to the photographs, on a plan view drawing of the construction site(s).
- 6. A written report summarizing the above monitoring results shall be submitted to the Iqaluit, NU office of the Department of Fisheries and Oceans – Fish Habitat Management, Eastern Arctic Area on, or before, December 31 of each year being reported on, for the life span of the water crossings and within ninety (90) days after decommissioning and restoration is completed.
- 7. Any deviation from the approved plans, the construction schedule, mitigation, compensation and/or monitoring measures stated above must be discussed with, and approved in writing by the Iqaluit, NU office of the Department of Fisheries and Oceans, Fish Habitat Management, Eastern Arctic Area.
- 8. “As constructed” drawings, certified by a licensed engineer, showing that structures and works have been completed according to the approved fish habitat compensation Plan shall be submitted to the Iqaluit, NU office of the Department of Fisheries and Oceans, Fish Habitat Management, Eastern Arctic Area., within 90 days of completing construction.
- 9. All mitigation, compensation and monitoring measures shall be implemented to the satisfaction of the Iqaluit, NU office of the Department of Fisheries and Oceans, Habitat Management, Eastern Arctic Area.
- 10. Written notification of the commencement of works or undertakings shall be provided to the Iqaluit, NU office of the Department of Fisheries and Oceans, Habitat Management, Eastern Arctic Area, 10 days prior to the initiation of said works or undertakings.

The holder of this authorization is hereby authorized under the authority of section 35(2) of the *Fisheries Act*. R.S.C., 1985, c.F. 14, to carry out the work or undertaking described herein. This authorization is valid only with respect to fish habitat and for no other purposes. It 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.

Failure to comply with any condition of this authorization may result in charges being laid under the *Fisheries Act*.

This authorization form shall be held on site and work crews shall be made familiar with the conditions therein.

Date of Issuance: ____April 10, 2007____

Approved by: ____*Original signed on behalf of* : ____

Bob Lambe

Title: Regional Director General, Central and Arctic Region
