



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Fish and Game

DIVISION OF HABITAT
Fairbanks Regional Office

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FISH HABITAT PERMIT

FH18-III-0064

ISSUED: April 9, 2018
EXPIRES: December 31, 2022

NovaCopper US Inc.
DBA Trilogy Metals
Attn: Cal Craig
609 Granville St., Suite 1150
Vancouver, BC V7Y 1K4

Dear Mr. Craig:

RE: APMA F189785
Dahl Creek
Sec 21, T18N, R9E, KRM, Shungnak D-2
Crossing Coordinate (WGS84): 66.9453 N / 156.9162 W
Subarctic Creek
Sec 1, T20N, R10E
Crossing Coordinate (WGS84): 67.1613 N / 156.5815 W
Subarctic Creek Drainage
Sec 2, 11-12, T20N, R10E, Sec 3, R11E,
Sec 35, T21N, R10E, Sec 28-29, 34-35, R11E, KRM, Ambler River A-1-2
Subarctic Creek Withdrawal Coordinate (WGS84): 67.1645 N / 156.4625 W

Pursuant to AS 16.05.841 (Fishway Act), the Alaska Department of Fish and Game (ADF&G), Division of Habitat, has reviewed your proposal to continue hardrock exploration in the uplands of the Subarctic Creek, and Shungnak and Kogoluktuk river drainages.

Project Description

Access along an existing trail to the area with equipment will involve crossings of Dahl and Subarctic creeks. You will withdrawal water from Subarctic Creek and other unnamed streams to support your drilling operation. No damming/ diversion of any natural waterbody will be conducted.

Fish Resources

The system in the area described supports resident species of fish (e.g., Arctic grayling). Your project as proposed should not obstruct the efficient passage and movement of fish.

Determination

In accordance with AS 16.05.841, project approval is hereby given subject to the project description above with the following stipulations:

- 1) Summer stream crossings with equipment and ATVs shall be made from bank to bank in a direction substantially perpendicular to the direction of stream flow to the extent practicable. Equipment crossings shall be made in a manner that precludes creation of barriers to efficient fish passage (ridging and/or rutting of streambed, etc.). No modifications to the banks of the stream are authorized via this permit.
- 2) Winter stream crossings with equipment and ATVs shall occur in shallow areas where the ice is naturally frozen to the streambed or in areas where ice thickness is adequate to support equipment. Equipment shall not enter open water during winter. Any ice/snow bridges and approach ramps constructed at stream crossings of any definable stream must be substantially free of extraneous material (i.e., soil, rock, wood, or vegetation). Any ice/snow bridge shall be breached or weakened and fill used for ramps shall be removed upon completion of use to facilitate breakup such that fish passage is maintained.
- 3) Each water intake structure shall be designed to prevent the entrainment, impingement and/or entrapment of fish and shall be installed and maintained at each intake location. The effective screen openings may not exceed 0.25 inches (1/4 inch), and water velocity at the screen/water interface may not exceed 0.5 feet per second when the pump is operating.

Note: For detailed information regarding screened intake device design please consult our webpage <http://www.adfg.alaska.gov/index.cfm?adfg=uselicense.withdrawal> and Technical Report No. 97-8 (http://www.adfg.alaska.gov/static/license/uselicense/pdfs/97_08.pdf). Feel free to contact our office for additional assistance.

You are responsible for the actions of contractors, agents, or other persons who perform work to accomplish the approved project. For any activity that significantly deviates from the approved plan, you shall notify the Division of Habitat and obtain written approval in the form of a permit amendment before beginning the activity. Any action that increases the project's overall scope or that negates, alters, or minimizes the intent or effectiveness of any stipulation contained in this permit will be deemed a

significant deviation from the approved plan. The final determination as to the significance of any deviation and the need for a permit amendment is the responsibility of the Division of Habitat. Therefore, it is recommended you consult the Division of Habitat immediately when any deviation from the approved plan is being considered.

For the purpose of inspecting or monitoring compliance with any condition of this permit, you shall give an authorized representative of the state free and unobstructed access, at safe and reasonable times, to the permit site. You shall furnish whatever assistance and information as the authorized representative reasonably requires for monitoring and inspection purposes.

This letter constitutes a permit issued under the authority of AS 16.05.841 and must be retained on site during project activities. Please be advised that this determination applies only to activities regulated by the Division of Habitat; other agencies also may have jurisdiction under their respective authorities. This determination does not relieve you of your responsibility to secure other permits; state, federal, or local. You are still required to comply with all other applicable laws.

In addition to the penalties provided by law, this permit may be terminated or revoked for failure to comply with its provisions or failure to comply with applicable statutes and regulations. The Division of Habitat reserves the right to require mitigation measures to correct disruption to fish and game created by the project and which was a direct result of the failure to comply with this permit or any applicable law.

You shall indemnify, save harmless, and defend the department, its agents, and its employees from any and all claims, actions, or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from permitted activities or your performance under this permit. However, this provision has no effect if, and only if, the sole proximate cause of the injury is the department's negligence.

Any questions or concerns about this permit may be directed to Habitat Biologist Todd Nichols at 907-459-7363 or emailed to todd.nichols@alaska.gov.

Sincerely,

Sam Cotten, Commissioner



BY: Audra L. J. Brase, Regional Supervisor
Division of Habitat
Alaska Department of Fish and Game

ecc: Brendan Scanlon, ADF&G SF, Fairbanks
Fairbanks Mining, ADNR, Fairbanks
Drew Harrington, ADNR, Fairbanks
Jenny Wynne, ADNR, Fairbanks
Placer Notices, ADEC, Fairbanks
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NOAA Fisheries, HCD, Anchorage
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AB/tn