

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES
OFFICE OF HABITAT MANAGEMENT AND PERMITTING
JUNEAU AREA OFFICE

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FISH HABITAT PERMIT FH05-I-0050A

ISSUED: May 6, 2005
AMENDED: April 19, 2007

Mr. Luke J. Russell
VP Environmental Services
Coeur Alaska, Inc.
3031 Clinton Dr., Suite 202
Juneau, AK 99801

RE: Tailings Impoundment Dam
Slate Creek (Stream #115-20-10030)
T35S, R62E, Section 26, CRM, Juneau (D-4)
City & Borough of Juneau, Alaska

Dear Mr. Russell:

Pursuant to AS 41.14.840 and AS 41.14.870(b), the Alaska Department of Natural Resources (DNR) Office of Habitat Management and Permitting (OHMP) has reviewed your proposal to remove a cofferdam below lower Slate Lake and harden a watercourse to direct Slate Lake flow into the natural Slate Creek streamcourse. The cofferdam, a component of the larger tailings storage facility (TSF) dam complex, was installed below the ordinary high water mark of lower Slate Lake after the waterbody was lowered 13 feet and as a measure to maintain water quality during construction. With the cofferdam removed, water flow from lower Slate Lake will be directed into Slate Creek via a waterway hardened with geotextile and riprap for erosion control. The water level in lower Slate Lake will return to a historical elevation. Water from upper Slate Lake continues to be diverted from mid-Lake Creek around lower Slate Lake and into Slate Creek. Downstream water quality will be monitored in accordance with Coeur Alaska's updated Stormwater Pollution Prevention Plan. I verbally authorized Coeur Alaska to conduct the work under AS 41.14.890 on 4/13/07.

In accordance with AS 41.14.840 and AS 41.14.870(d), your Fish Habitat permit is amended.

Project Description for FISH HABITAT PERMIT FH05-I-0050

Coeur Alaska, Inc. proposes to construct a dam that will raise the water level in Lower Slate Lake by about 85 feet; increasing the size of the lake from about 20 to 56 acres, and flooding the majority of mid-Lake Creek, the main inflow to Lower Slate Lake. Mine tailings will be stored in the lake. mid-Lake Slate Creek will be diverted around the TSF during operations. Downstream fish passage will be provided by either manual relocation of fish or through the diversion. The TSF will be used for approximately twelve (12) years and then reclaimed to provide fish and wildlife habitat

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equivalent to the existing habitat. At reclamation, downstream migration would be provided via a spillway located on the west side of the dam. This project was found consistent with the Alaska Coastal Management Program on 04/25/2005 (State I.D. No. AK 0406-13J).

Anadromous Fish Act and Fishway Act Requirements

The dam and the impoundment of tailings in Lower Slate Lake will impact the aquatic ecosystem, both above and below the dam during construction and operation. Alaska Statute (AS) 41.14.850 provides ways to compensate for the impacts to fish passage. Coeur Alaska, Inc. proposes habitat improvements during reclamation that meet the requirements of AS 41.14.850. OHMP has determined that there will not be an overall negative impact to fish and wildlife resources in the Slate Creek drainage after the area is reclaimed. The basis for our decision follows:

- Slate Creek below Lower Slate Lake has been specified as being important for the migration, spawning or rearing of chum, pink and coho salmon in accordance with AS 41.14.870(a). However, a permanent barrier to the upstream migration of anadromous fish is located approximately one mile below the proposed dam near the confluence of the East and West Forks of Slate Creek.
- Lower Slate Lake is a deeply incised 20-acre lake up to 50 feet deep. The lake has populations of resident Dolly Varden char and three-spine stickleback. Productivity of the lower lake is relatively low compared to Upper Slate Lake, largely because it is deep and lacks substantial shallow littoral habitat and productive inlet streams. The lower lake provides rearing habitat for Dolly Varden char, but spawning has not been documented in the lower lake or inlet streams. Recruitment of Dolly Varden char comes from fish spawned in inlet streams to Upper Slate Lake which enter Lower Slate Lake via Mid-Lake Slate Creek
- The tailings in Lower Slate Lake are expected to have very low toxicity. Following reclamation, the larger and shallower lake is expected to provide habitat for macroinvertebrates and forage fish that will support a population of Dolly Varden char. If monitoring shows the tailings are not suitable for colonization, the tailings will be capped with clean material. We anticipate the reclaimed area will provide over-wintering, spawning, and rearing habitat for Dolly Varden char.
- Upper Slate Lake is not expected to be affected by the dam and will provide seed populations of fish, invertebrates, plants, and wildlife native to the lake system during the reclamation of the lower lake.
- In order to assure that there are adequate flows to maintain conditions for spawning, incubation, rearing and migration of fish in Slate Creek, water withdrawals will not be allowed when natural flows are below the in-stream flow schedule specified in Water Right LAS 24486.

Therefore, in accordance with AS 41.14.840 and AS 41.14.870(d) project approval is hereby given subject to the following stipulations:¹

1. Prior to construction, Coeur Alaska, Inc. shall provide plans and specifications to the Office of Habitat Management and Permitting for review and approval for the earthen fill dam to be constructed near the outlet of Lower Slate Lake. Plans and specifications must address how safe downstream passage of fish will be provided during construction and operation of the facility and how dam and spillway design will provide for safe downstream passage after closure of the facility.²
2. The integrity of the earthen dam fishway must be maintained for the life of the structure in accordance with the terms and conditions of this permit so that free passage of fish is assured. Any obstruction to the free passage of fish must be restored to the satisfaction of OHMP.
3. Prior to construction, Coeur Alaska, Inc. shall develop and submit an ecological monitoring plan for Upper and Lower Slate Lakes and East Fork Slate Creek to OHMP for review and approval. The ecological monitoring plan must include a list of objectives and a general description of sampling methods and timing. The ecological monitoring plan must be updated annually.
4. Prior to construction, Coeur Alaska, Inc. shall develop and submit a reclamation and closure plan for aquatic habitats in the Lower Slate Lake area to OHMP for review and approval. Proposed revisions to the reclamation and closure plan may be submitted to OHMP at any time, but the plan must be updated every three years with the final plan submitted two years prior to closure.

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 OHMP 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 stipulations 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 OHMP. Therefore, it is recommended you consult OHMP immediately when a deviation from the approved plan is being considered.

This letter constitutes a permit issued under the authority of AS 41.14.840 and AS 41.14.870. This permit must be retained on site during construction. Please be advised that this determination applies only to activities regulated by OHMP; other divisions with ADNR also may have jurisdiction under their respective authorities. This determination does not relieve you of your

¹ Stipulations #1 and #2 are required for compliance with AS 41.14.840. Stipulations #3 and #4 are required for compliance with both AS 41.14.840 and AS 41.14.870.

² Pursuant to AS 41.14.840, Coeur Alaska, Inc. has proposed to offset impacts from construction of the dam by restoring and enhancing habitat in Lower Slate Lake. OHMP has determined construction of an efficient upstream fishway over the dam is not practical and that reclamation will satisfy the compensation requirements of AS 41.14.850.

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 department reserves the right to require mitigation measures to correct disruption to fish created by the project which was a direct result of failure to comply with this permit or any applicable law.

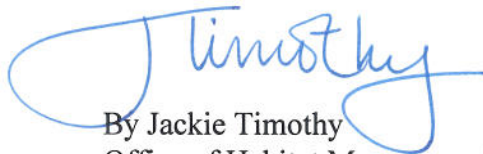
You shall indemnify, save harmless, and defend the department, its agents, and its employees from any and all claims, actions or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from permitted activities or your performance under this permit. However,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

This permit decision may be appealed in accordance with the provisions of AS 44.62.330-630.

If you have any questions, please contact me at (907) 465-4275.

Sincerely,

Richard A. LeFebvre
Deputy Commissioner



By Jackie Timothy
Office of Habitat Management and Permitting
Department of Natural Resource

Cc: by email:

Al Ott, DNR/OHMP, Fairbanks
Tom Crafford, DNR/OPMP, Anchorage
Brian Glynn, ADF&G, Douglas
Richard Chapell, ADF&G, Haines
Randy Bachman, ADF&G, Haines
Mark Fink, ADF&G, Anchorage
Kenwyn George, ADEC, Juneau
Victor Ross, USACE, Anchorage
Pete Griffin, USFS, Juneau
Steve Hohensee, USFS, Juneau
Crellin Scott, Coeur, Juneau

References:

Kline, E. (Kline Environmental Research, LLC), 2003a. *Kensington Project: Summary and Interpretation of Fish and Habitat Data from Slate Creek and Johnson Creek Drainages with an Emphasis on Lower Slate Lake.*

Kline, E. (Kline Environmental Research, LLC), 2003b. Technical memorandum to Rick Richins and Eric Klepfer: Preliminary results of 2003 Slate Lakes field work.

USFS, December 2004. *Kensington Gold Project, Final Supplemental Environmental Impact Statement.* Juneau Ranger District, Tongass National Forest, Juneau, AK.