STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINING, LAND & WATER
Water Resources Section
Southeast Regional Office

Finding and Determination pursuant to the Alaska Water Use Act AS 46.15.080

LAS 24486
Coeur Alaska, Kensington Mine, Slate Creek Water Right Application

Pending Action:
ADNR/Water Resources has received an application for a water right from

Coeur Alaska, Inc.
3031 Clinton Drive
Juneau, AK 99801

to appropriate water from Lower Slate Lake within the W½ NW¼ of Section 26 and the NE¼ NE¼ of Section 27, or from the lake's inlet stream known as Mid-Lake Slate Creek within the NW¼ NW¼ of Section 26 and the W½ SW¼ of Section 23, all within Township 35 South, Range 62 East, Copper River Meridian, up to 5315 gallons per minute, year-round, for the maintenance of water quality and aquatic habitat in East Slate Creek downstream from the dam at the mouth of Lower Slate Lake, and for the eventual reclamation of Lower Slate Lake after its conversion to a tailings storage facility and mine closure.

In order for a Permit to Appropriate Water to be issued, ADNR/Water Resources must make a written finding pursuant to AS 46.15.080, as follows:

AS 46.15.080. Criteria for issuance of permit.
[The text of the statute is in bold type; discussion is in regular type.]

(a) The Commissioner shall issue a permit if the commissioner finds that

(1) rights of a prior appropriator will not be unduly affected;
There are no prior appropriators of record for the East Fork Slate Creek/Upper or Lower Slate Lake water bodies.

(2) the proposed means of diversion or construction are adequate;

The proposed means of diversion consist of the Tailings Storage Facility (TSF) dam, the Mid-Lake Slate Creek diversion dam and diversion pipeline, and the water treatment system for the TSF discharge. The TSF dam construction and operation fall under the regulatory responsibility of the Alaska Dam Safety Program; therefore the adequacy of its means of diversion and construction need not be discussed here, and are assumed to be adequate. The Mid-Lake Slate Creek diversion dam is described in the USFS Plan of Operations (p. 71; Fig. 12); it and the TSF water treatment system are described conceptually in Knight Piésold's 3 June 2004 letter report, "Modeling of Upper Slate Lake Diversion and TTF Supernatant Treatment Capacity", and in Coeur's 4 June 2004 letter to EPA, "Supplemental Information Submittal for NPDES Permit, …, Contingency Water Treatment Proposal". Coeur has the capability to construct an adequate Mid-Lake Slate Creek diversion dam and TSF water treatment system, and the dam plan appears to be adequate for the diversion applied for. I therefore find that the proposed means of diversion and construction are adequate. [Note: Coeur's original water right application did not include the Mid-Lake Slate Creek diversion dam. This feature and its diversion was added to the application by amendment, per Attestation to the File dated 23 June 2004.]

(3) the proposed use of water is beneficial;

Slate Creek water is proposed to be diverted, controlled, and on a contingency basis treated, for the maintenance of water quality in East Slate Creek and for the eventual reclamation of Lower Slate Lake after its conversion to a tailings storage facility. "Beneficial use" is defined in the Alaska Water Use Act as "a use of water for the benefit of the appropriator, other persons or the public, that is reasonable and consistent with the public interest, including, but not limited to, … mining, … fish and wildlife, recreational uses, and maintenance of water quality." Therefore, I find the proposed uses to be beneficial. Beneficial use would cease when, after reclamation, Mid-Lake Slate Creek diversion flow ceases, Lower Slate Lake water treatment system flow ceases, Lower Slate Lake dam seepage pumpback ceases, and East Slate Creek flow is allowed to exit Lower Slate Lake via unrestricted flow over the final permanent spillway.

(4) the proposed appropriation is in the public interest.

Having made the considerations required by subsection (b) below, I find that the proposed appropriation is in the public interest.

(b) In determining the public interest, the commissioner shall consider

(1) the benefit to the applicant resulting from the proposed appropriation;

The proposed appropriation is necessary to allow the diversion and use of water for the maintenance of water quality, without which Coeur could not develop and operate the Kensington Mine in its currently proposed configuration while reliably meeting Alaska Water Quality Standards in East Slate Creek downstream from the TSF. It is assumed that without the proposed appropriation Coeur could not obtain the necessary NPDES permit for the TSF, and therefore could not develop the Kensington Mine. The appropriation is therefore assumed to be necessary for any economic benefit from the Kensington Mine project that might accrue to the applicant. There is no evidence in the record to indicate that the applicant is proceeding counter to the applicant's economic interests.

(2) the effect of the economic activity resulting from the proposed appropriation;

As an authorization without which the Kensington Mine could probably not be developed in its currently proposed configuration, the proposed appropriation, like any other required authorization, can be considered as a necessary element of any resulting economic effect. However, ADNR/Water Resources does not have the staff capability to independently analyze the effect of the economic activity resulting from the proposed appropriation. We must therefore rely on other evidence in the record. The USFS Final Supplemental Environmental Impact Statement, December 2004, Socioeconomics Section, is assumed to be the most comprehensive current statement of likely economic effects of the mine project on the region of interest. This analysis appears to conclude that the economic impacts of the Kensington Mine's construction and operation would have a net positive effect on the region of influence (the CBJ) and on the state as a whole [4.15.4 Summary, p. 4-118]. There is no evidence in the record indicating a likelihood of a net negative economic effect to the region of influence or to the state. Therefore, it is reasonable to conclude that the effect of the economic activity resulting from the proposed appropriation can be expected to be positive.

(3) the effect on fish and game resources and on public recreational opportunities;

The proposed appropriation of water is a result of the plan, under Alternatives B, C, and D of the USFS Final Supplemental Environmental Impact Statement, December 2004, to convert Lower Slate Lake into a Tailings Storage Facility (TSF).

Slate Creek is cataloged in ADF&G's Anadromous Waters Catalog (#115-20-10030) for pink salmon. The SEIS for the Kensington Mine Project states that pink, chum and coho salmon, Dolly Varden char and cutthroat trout exist in Slate Creek.

Lower Slate Lake contains Dolly Varden char and three-spine stickleback. The TSF would result in the loss of all fish habitat in Lower Slate Lake, approximately 1200 feet of fish habitat in Mid-Lake Slate Creek, and 200 feet of fish habitat in Lower Slate Creek during operation of the mine [FSEIS, 4.9.7; p. 4-44]. The 1200 feet of stream habitat in Mid-Lake Slate Creek would be converted by inundation to lake habitat after completion of operations. The 200 feet of Lower Slate Creek habitat would be permanently covered by the TSF dam. Lower Slate Lake would be reclaimed after mine operations into a larger, shallower lake, with at least equivalent area in shallow plant and macroinvertebrate habitat, expected to support at least an equivalent fish population [SEIS, 4.9.3; p. 4-39].

Construction of the Lower Slate Lake TSF would remove approximately 33 acres of upland (potential goose nesting) habitat for Vancouver Canada Geese. Additional shoreline habitat will eventually result from inundation and reclamation of Lower Slate Lake [SEIS, 4.11.2; pp. 4-72, 73]. River otters will be impacted by construction and operations disturbances [SEIS, 4.11.2; p. 4-73].

ADNR/OHMP has indicated its intention to issue Title 41 permits for the necessary construction and reclamation of the TSF, including requirements for downstream fish passage after closure and reclamation. ADNR/Water Resources defers to OHMP in its estimation that project effects on fish and wildlife habitat are acceptable, if permits are suitably conditioned and the conditions are met. ADF&G, through ADNR/OHMP, has recommended that the following instream flow schedule for East Slate Creek below the tailings dam be made a condition of this water right, to maintain conditions for spawning, incubation, rearing and migration of fish in lower Slate Creek to its mouth:

January	2.7 cubic feet per second (CFS)
February – March	3.5 CFS
April	1.9 CFS
May – August	2.2 CFS
September – October	5.7 CFS
November – December	2.7 CFS

East Slate Creek stream flow below the dam is controlled by a tailings impoundment that, to fulfill its water quality maintenance function, must be operated to hold reservoir levels fairly constant with a minimum required water cover over the tailings. Therefore, impounded water could not be called on to maintain instream flows during low flow conditions. Accordingly, the instream flow condition would require that stream flows be maintained in the stream that are not less than the flow amounts in the schedule, or that

are not less than natural Lower Slate Lake inflow if inflow is concurrently less than the otherwise required instream flow for that period of time.

There is no known current significant recreational use of Slate Creek and Lower Slate Lake. The effect of the proposed appropriation could be to increase long-term float plane accessibility of Lower Slate Lake slightly because of the increased lake area. If Lower Slate Lake reclamation goals are met, the attractiveness of the lake for recreational fishing could be increased somewhat.

Therefore, it is reasonable to consider the effects of the proposed appropriation on fish and game resources and on public recreational opportunities to not be significant, once the reclamation of Lower Slate Lake is completed.

(4) the effect on public health;

The proposed appropriation will be made from the water of the Slate Lakes and East Slate Creek drainage, which is not used for public water supply or wastewater treatment dilution; nor are these uses expected to be made of this water in future.

In the broader sense of effect on the environment upon which public health depends, the proposed appropriation involves a discharge that requires an EPA NPDES permit and an ADEC Certificate of Reasonable Assurance for the NPDES permit. The discharge (Outfall 002) is from the TSF to East Slate Creek.

ADNR/Water Resources defers to ADEC regarding the compliance of the project with relevant Alaska Water Quality Standards and assumes that the proposed appropriation of water will have no adverse effect on public health.

(5) the effect of loss of alternate uses of water that might be made within a reasonable time if not precluded or hindered by the proposed appropriation;

The record contains no evidence of alternate uses of the water proposed to be appropriated, with the exception of the following:

- Commentors have suggested that Slate Creek or Slate Lake water be used to replace some of the Johnson Creek water proposed to be appropriated (LAS 24432) for mill processes. It is the intention of the applicant to recycle back to the mill a large portion (approximately 160 gpm or 0.36 CFS) of the water component (approximately 180 gpm or 0.40 CFS) of the tailings slurry entering the TSF. There is nothing in the physical configuration of this proposed appropriation that would preclude future use of Slate Creek/Slate Lake water for mill purposes, if other factors allowed it.

- The gradient of the Slate Creek drainage, the existence of the Slate Lakes, and the possible feasibility of a dam and reservoir indicate a possible potential for hydroelectric development. However, it does not appear that the proposed TSF dam would preclude future development of a small run-of-river hydroelectric facility. In fact, the existence of a piped diversion flow around the TSF raises the possibility of recapturing some of the flow's energy by means of a conduit turbine at the discharge, during the operations phase of the mine project and until the diversion flow is replaced by a passive spillway flow upon reclamation.

Therefore, no loss of alternate uses of water are expected to occur as a result of the proposed appropriation.

(6) harm to other persons resulting from the proposed appropriation;

The record contains no evidence of a possibility of harm to other persons from the proposed appropriation.

(7) the intent and ability of the applicant to complete the appropriation;

The applicant is Coeur Alaska Inc., which has so far demonstrated the ability to perform the planning and studies required for the proposed mine, and whose parent company has elsewhere demonstrated the ability to develop large mines. The record contains no evidence of a lack of intent on the part of the applicant to complete the proposed appropriation.

(8) the effect upon access to navigable or public water.

East Slate Creek and Lower Slate Lake have not been determined to be navigable water; however, ADNR has not examined the navigability of these waters. The mine operator intends to limit public access to mine facilities, through limiting access on the road from Slate Creek Cove. Lower Slate Lake lies within the Tongass National Forest, and following mine closure and reclamation would again be subject to the same USFS policies governing public access that exist now. Lower Slate Lake is only about 23 acres in area, but would eventually occupy 56 acres when fully converted to the TSF and then reclaimed. Shortly thereafter reclamation is expected to be done and mine shutdown would occur after state and USFS approval, likely within the space of a few years. Therefore any negative effects of the proposed appropriation on access to navigable or public water would be temporary.

CONCLUSION

I have found in the affirmative as required by AS 46.15.080 (a) (1), (2), and (3), and have made the considerations required by AS 46.15.080 (b), which support a finding that the proposed appropriation is in the public interest, as required by AS 46.15.080 (a) (4). The finding and determination required by statute is therefore made, and the permit applied for shall therefore be issued, subject to conditions to protect the public interest.

John Dunker, John Dunker, Water Res. Mgr. 5 May 2005
(Signature, Name, Title) (Date)

State of Alaska
Department of Natural Resources

PERMIT TO APPROPRIATE WATER
LAS 24486

The State of Alaska, acting by and through the Department of Natural Resources, Division of Mining, Land and Water, 550 West 7th Avenue, Suite 900A, Anchorage, AK 99501-3577, hereinafter referred to as the grantor, under AS 46.15, the Alaska Water Use Act, and the regulations adopted under it, grants to:

Coeur Alaska, Inc.
3031 Clinton Drive
Juneau, AK 99801

The right to the following use of water:

SOURCE:	East Slate Creek / Lower Slate Lake
QUANTITY:	8,530 acre feet per year
MAXIMUM WITHDRAWAL RATE:	5315 gallons per minute (approx. 11.8 cfs)
PERIOD:	1 January through 31 December
USE:	Maintenance of water quality and aquatic habitat

With a PRIORITY DATE of 24 October 2003.

The LOCATION of this water source:

Lower Slate Lake within the W½ NW¼ of Section 26 and the NE¼ NE¼ of Section 27, and the lake's inlet stream known as Mid-Lake Slate Creek within the NW¼ NW¼ of Section 26 and the W½ SW¼ of Section 23, all within Township 35 South, Range 62 East, Copper River Meridian.

The LOCATION to which this appropriation is appurtenant:

East Slate Creek downstream from the tailings impoundment dam and diversion discharge, within the SW¼ NW¼ and the W½ SW¼ Section 26, and the W½ Section 35, Township 35 South, Range 62 East, Copper River Meridian.

Changes in the natural state of water are to be made in the manner and only for the purposes stated in this permit. This permit is subject to the pertinent statutory provisions in AS 46.15, Administrative Regulations in 11 AAC 93, and the following conditions:

PERMIT TO APPROPRIATE WATER
LAS 24486

The holder of this permit shall:

1. Follow acceptable engineering standards in exercising the privilege granted by this permit.

2. Except for claims or losses arising from negligence of the State, defend and indemnify the State against and hold it harmless from any and all claims, demands, legal actions, loss, liability and expense for injury to or death of persons and damages to or loss of property arising out of or connected with the exercise of the privilege granted by this permit.

3. Comply with all applicable laws, regulations and conditions.

4. Notify the grantor of any change of address, transfer of any real property identified in this permit, or any proposed change in the water appropriation.

5. Respond to any request for additional information during the duration of this permit per AS 46.15.100 and AS 46.15.175. Failure to respond may result in the termination of this permit.

6. Obtain and maintain permanent right of access to the property where water is to be withdrawn, impounded, or diverted, and over which water is to be transported both to the point of use and to the point of discharge, per 11 AAC 93.040 (c) (4).

7. Pay an annual Administrative Service Fee that shall be assessed upon this appropriation of water, per 11 AAC 05.010 (a) (8) (m).

8. Maintain within East Slate Creek downstream from the tailings impoundment dam and diversion discharge at a point approved in the stream gaging plan (See Condition 10.), stream flows not less than the flow amounts in the following schedule, or natural Lower Slate Lake inflow if inflow is concurrently less than the otherwise required flow:

January	2.7 cubic feet per second (cfs)
February – March	3.5 cfs
April	1.9 cfs
May – August	2.2 cfs
September – October	5.7 cfs
November – December	2.7 cfs

9. Continuously measure stream flow in East Slate Creek downstream from the tailings impoundment dam and diversion discharge in accordance with a stream gaging plan approved by the Department. The plan is to be submitted to the Department within 60 days after issuance of this Permit. The Department's

approval may include a requirement to commence stream gaging by a date certain or within a certain amount of time.

10. Measure and report to the Department monthly the daily amounts of water diverted from Mid-Lake Slate Creek and from Lower Slate Lake, according to a water use measurement plan to be submitted to the Department not later than 60 days prior to the commencement of water diversion, for approval by the Department. The plan shall include provisions for the metering of all water withdrawals or diversions (except for the water component of tailings slurry transports, which shall be estimated and reported) of 30,000 gallons per day or more.

The permittee must follow all applicable statutes, regulations, and plan requirements of the Alaska Coastal Management Program (ACMP). This authorization is subject to ACMP Consistency Finding AK0406-13J issued 25 April 2005, and to its relevant alternative measures.

This permit shall EXPIRE on 4 May 2015.

This Permit to Appropriate Water is issued by the authority of AS 46.15.080 and 11 AAC 93.120 on 5 May 2005.

APPROVED: John Dunker
Signature

John Dunker
Name

Water Resource Manager
Title