

# STATE OF ALASKA

**DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
DIVISION OF WATER  
WASTEWATER DISCHARGE PERMIT PROGRAM**

**FRANK H. MURKOWSKI, GOVERNOR**  
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March 31, 2005

Mr. Rich Heig  
General Manager  
Kennecott Greens Creek Mining Company  
P.O. Box 32199  
Juneau, AK 99803-2199

RE: State of Alaska, DEC 401 Certification of NPDES Permit No. AK-004320-6

Dear Mr. Heig;

In accordance with Section 401 of the Clean Water Act of 1977 and provisions of the Alaska Water Quality Standards, the Department of Environmental Conservation issues the enclosed Certificate of Reasonable Assurance for the renewal of the National Pollution Discharge Elimination System (NPDES) permit for discharges of storm water and treated mine waste waters (domestic and non-domestic) from the Greens Creek mine located on Admiralty Island, Alaska.

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195- 18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. Informal review requests must be delivered to the Director, Division of Water, 410 Willoughby Ave., Juneau, Alaska 99801, within 15 days after receiving the Department's decision. Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 30 days after the Department issues a final decision. If a hearing is not requested within 30 days, the right to appeal is waived.

Sincerely,

**Signature on File**

Gretchen Keiser  
Program Manager  
Wastewater Discharge Program

Enclosure: Certificate of Reasonable Assurance

cc:

Kenwyn George, ADEC/Juneau  
Pete McGee, ADEC/Fairbanks  
Cindi Godsey, EPA Reg. 10, Anchorage  
Bruce Botelho, Mayor, City & Borough of Juneau

ADF&G/Juneau  
Ed Fogels, ADNRR, Fairbanks  
Mike Lidgard, EPA Reg. 10, Seattle, WA  
Steve Hohensee, USFS, Juneau

STATE OF ALASKA  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
FINAL CERTIFICATE OF REASONABLE ASSURANCE

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A Certificate of Reasonable Assurance, as required by Section 401 of the Clean Water Act, was requested by Kennecott Greens Creek Mining Company (KGCMC) for the discharge of domestic waste water, non-domestic waste water and storm water from the Greens Creek mine.

The activity is located at:

Outfall 001	Hawk Inlet	Latitude 58° 07' 30" N	Longitude 134° 45' 15" W
Outfall 002	Hawk Inlet	Latitude 58° 07' 00" N	Longitude 134° 44' 30" W
Outfall 003	Hawk Inlet	Latitude 58° 07' 30" N	Longitude 134° 45' 15" W
Outfall 004	Wetlands	Latitude 58° 08' 00" N	Longitude 134° 44' 55" W
Outfall 005.2	Zinc Creek	Latitude 58° 05' 01" N	Longitude 134° 44' 55" W
Outfall 005.3	Greens Creek	Latitude 58° 04' 00" N	Longitude 134° 43' 00" W
Outfall 005.4	Greens Creek	Latitude 58° 04' 00" N	Longitude 134° 43' 00" W
Outfall 005.5	Greens Creek	Latitude 58° 05' 01" N	Longitude 134° 37' 00" W
Outfall 006	Greens Creek	Latitude 58° 05' 00" N	Longitude 134° 37' 00" W
Outfall 007	Greens Creek	Latitude 58° 05' 00" N	Longitude 134° 45' 13" W
Outfall 008	Greens Creek	Latitude 58° 05' 00" N	Longitude 134° 45' 15" W
Outfall 009	Greens Creek	Latitude 58° 04' 09" N	Longitude 134° 45' 14" W

on Admiralty Island near Juneau, Alaska.

A Certificate of Reasonable Assurance is required for the activity, because the activity will be authorized by an Environmental Protection Agency permit identified as NPDES Permit No. AK-004320-6 and a discharge will result from the activity.

Public notice of the application for this certification was made in accordance with 18 AAC 15.140. After review of the public comments received in response to the public notice, the Alaska Department of Environmental Conservation certifies that there is reasonable assurance that the activity and the resulting discharge is in compliance with the requirements of Section 401 of the Clean Water Act, which includes the Alaska Water Quality Standards (18 AAC 70)) and the Standards of the Alaska Coastal Management Program, (ACMP, 11 AAC 112), provided that the following stipulations are adhered to.

These stipulations are adopted pursuant to 11 AAC 110 (Project Consistency with the Alaska Coastal Management Program) and are necessary to ensure that the project authorized under the permit is consistent with the ACMP. This project is found to be consistent with the ACMP

Antidegradation

The mixing zones for this permit do not change from those certified in the 1998 NPDES permit, and water quality is protected to the same degree. The Department therefore finds that the mixing zones and discharges contained in this Certificate are in compliance with the antidegradation requirements in 18 AAC 70.015.

State of Alaska Certification Stipulations

DEC approves the use of mixing zones for the discharges from outfalls 001 and 002.

- 1) Mixing zone for Outfall 1. Outfall 001 is for treated domestic waste water. The plant is not currently operating; all domestic waste water goes to Outfall 002. However, KGCMC has requested this discharge and associated mixing zone should they wish to discharge treated domestic waste via this outfall during the life of the permit. A mixing zone of 100 meters is permitted for this discharge based on a dilution factor of 500. This results in a daily maximum fecal coliform limit of 21,500 fc/100 ml and an average monthly limit of 7,000 fc/100ml. If chlorine is used for disinfection, the acute water quality standard of 13 µg/l total residual chlorine is to be met at the point of discharge.
- 2) Mixing zone for outfall 002. Outfall 002 is primarily for treated mine and mill waste water; it also discharges treated domestic waste water and storm water. Dilutions required to meet water quality standards from the Reasonable Potential calculations are as follows:

Parameter	RP Max Effluent Conc.	Chronic WQ standard	Dilution required to meet WQS
Cadmium	100 µg/l	8.8 µg/l	11.4
Copper	300 µg/l	3.1 µg/l	97
Cyanide	34 µg/l	1.0 µg/l	34
Lead	600 µg/l	8.1 µg/l	74
Mercury	2 µg/l	0.94 µg/l	2.2
Zinc	1000 µg/l	81 µg/l	12.4
pH	6.0-9.0	6.5-8.5	2.0
WET, TUc	11.1	1	11.1

The pollutant requiring the greatest dilution is copper, for which a dilution factor of 97 is required. A mixing zone size of 300 feet along the length of the diffuser x 50 feet to either side of the diffuser was approved in the 1998 NPDES permit and shall remain effective for this current permit. Modeling shows that a dilution factor of 97 can be achieved within this mixing zone size of 300 ft. x 100 ft. The mixing zone is shown in Attachment A.

3) Inspection of Outfall 002

An annual video and written report of the condition of the diffuser and diffuser ports at outfall 002 shall be provided to the Department within 30 days of the inspection.

3/31/05  
Date

Signature on file

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Gretchen Keiser, Manager  
Wastewater Discharge Program  
AK Department of Environmental Conservation

**Attachment A**

