STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF LAND AND WATER MANAGEMENT

PERMIT
TO
APPROPRIATE WATER
LAS 11807

The State of Alaska pursuant to Alaska Statute 46.15, The Alaska Water Use Act, and the administrative regulations adopted under it, grants to:

Greens Creek Mining Company
3000 Vintage Blvd., Suite 200
Juneau, Alaska 99802

The right to develop the following use of water:

A variable rate, as conditioned in this permit, of up to 700 gallons per minute (gpm) from Greens Creek, on a year-round basis for use in the milling of ore and the associated domestic needs of the millsite complex, with a priority date of March 10, 1988.

The location of the source to which this water right appertains is:

An infiltration well system in upper Greens Creek, located on the north side of Greens Creek, east of the bridge and upstream of the control weir within the SE1/4 SW1/4 protracted section 4, Township 44 South, Range 66 East, Copper River Meridian. The rate of withdrawal, up to a maximum 700 gpm, is coordinated with and controlled by instream flow levels as described in the conditions of this permit. A maximum 10 gpm out of this 700 gpm shall be used to support all associated domestic needs of the millsite complex. The remaining 690 gpm will be withdrawn only as necessary to meet the needs of the milling process after maximum reuse of audit drainage, internal process water recycle, and recycle of site dewatering and runoff water.

The water shall be used in and the rights shall be appurtenant to that certain tract of real property encompassing the Greens Creek millsite complex, located within the S1/2 SW1/4 protracted section 4, Township 44 South, Range 66 East, Copper River Meridian and comprising approximately 54.66 acres as described in the amended U.S. Forest Service Lease document dated August 25th, 1987.

Changes in the natural state of water are to be made in the manner and only for the purposes stated in this permit. Non-compliance with the conditions of use shall constitute evidence of intent to abandon and forfeit the rights granted in this permit and may result in the revocation of these rights per AS 46.15.100 and AS 46.15.175.

This permit is subject to the pertinent statutory provisions in AS 46.15, administrative regulations in 11 AAC 93, and the following conditions:

1. The permittee shall limit the withdrawal of water from Greens Creek in accordance with the "ramp" approach discussed on pages 2-12 thru 2-14 and as graphically illustrated in figure 9 of the "ENVIRONMENTAL ASSESSMENT FOR PROPOSED CHANGES TO THE GENERAL PLAN OF OPERATIONS FOR THE DEVELOPMENT AND OPERATION OF THE GREENS CREEK MINE, Admiralty Island National Monument, Alaska", dated March 1988. In order to insure the effectiveness of this approach, the permittee shall accomplish the following:

   a. The permittee shall not withdrawal water if stream flow is less than 2.1 cubic feet per second (cfs). Withdrawal shall never exceed 700 gpm. When stream flows range between 2.1 cfs and 5 cfs, the withdrawal rate shall not exceed the allowable level which is computed as follows:

      Allowable withdrawal,gpm = (241.38 * creek flow,cfs) -506.9

   b. The permittee shall construct and maintain a new gaging station located immediately down stream of the water intake structure. The station shall incorporate:

      A compound weir which shall provide a measurement of + or - 0.2 cfs (90 gpm) at the flow range of 2.1 to 5 cfs. The weir shall be constructed to minimize sediment build-up and other maintenance necessary to insure accuracy.

      A differential pressure element that is capable of continuously monitoring water level within 5% accuracy and record the flow across the weir;

      A dual pen fanfold strip-chart recorder shall be installed to graphically illustrate; long term withdrawal data, long term streamflow data and, trends during low flow periods.

   c. The permittee shall continuously monitor streamflow and regulate withdrawal automatically based upon the actual streamflow measurements and the formula for allowable withdrawal referenced above. The automatic regulation of withdrawal shall incorporate a programmable controller and data recorder to perform the following functions:
      - Record the flow rate in Greens Creek and the withdrawal rate. For regulatory, monitoring, and reporting purposes, an allowable maximum error of 10 percent will be used;
      - Record minimum and maximum flows;
      - Initiate alarms at critical flow points;
      - Initiate control sequences to limit withdrawal rates in conjunction with streamflow as shown in figure 9;
      - Limit withdrawals at streamflows of 5 cfs and below;
      - Terminate withdrawal when streamflow drops below 2.1 cfs.

d. The permittee shall submit all stream flow and water use data as mean daily flows in a format similar to the one used by the U.S. Geological Survey in their annual reports. Low flow extremes and the duration of the extremes shall be presented in the data reports. During the first year of Mill operations the data shall be submitted to this department on a quarterly basis, thereafter it shall be submitted annually.

e. The permittee shall notify the department when stream flow rates at the weir drop below 9 cfs. Following this notification the permittee shall submit weekly records of withdrawal and streamflow rates until streamflows increase above the 9 cfs level.

f. The permittee shall operate the new gaging station concurrently with the existing Lower Greens Creek gaging station until the permittee has provided at least twelve months of continuous data, collected and reported to acceptable standards. At that time the lower station may be discontinued, providing no extenuating circumstances require continued use.

g. The permittee shall submit a written request for change of appropriation if, as water use development occurs, modifications to the specifics outlined above become necessary.

2. In accepting the findings of the CONCLUSIVE CONSISTENCY DETERMINATION (GREENS CREEK 1 - STATE I.D. NO. AK880401-03J) dated July 1, 1988, the permittee has agreed to comply and shall comply with the following ACMP stipulations:

   The final weir design shall permit measurement of low stream flows to a confidence level of plus or minus 0.2 cfs or better.

   Water use during the low flow periods shall be conditioned on the withdrawal "ramp" displayed in figure 9 of the March 1988 environmental assessment, with no withdrawals when stream flows fall to 2.1 cfs or less.

   If icing conditions are known to exist at the weir gauging structure, or if winter flows drop to 9 cfs or less, daily visual inspection of the weir must be made and recorder accuracy determined. If the system is found to be ice affected, alternate flow measurements shall be taken with a flow meter to recalibrate the recorder and/or determine the allowable withdrawal for that day.

3. The permittee shall follow acceptable engineering standards in exercising the privilege granted by this permit and shall respond to any departmental request for additional information during the duration of this permit. Per AS 46.15.100 and AS 46.15.175, failure to respond in a timely manner may result in the termination of this permit.

4. The permittee shall comply with all applicable laws, regulations and conditions; and shall 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.

5. The permittee shall notify the Department of any change of address of the grantee or transfer of any real property identified in this document.

All notifications or submittals referenced in this document shall go to the following: Southeast Regional Manager, Division of Land and Water Management, 400 Willoughby Ave., Suite 400, Juneau, Alaska 99801.

With the issuance of this permit, the relinquishment of all rights to the use of 250 gpm, as defined in case # LAS 1707, takes effect. All rights revert to the State and the water becomes unappropriated.

This permit expires on: March 10, 1998

This permit to appropriate water is issued by authority of AS 46.15.080 and 11 AAC 93.120 on October 5, 1988.

Approved: [signature]

Title: [signature]
Division of Land and Water Management