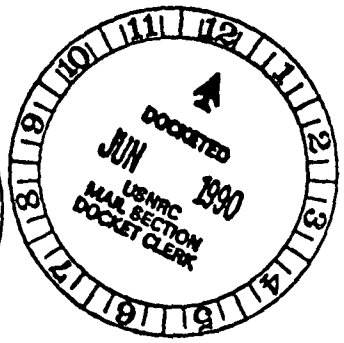
HOMESTAKE MINING COMPANY
P.O. BOX 98
GRANTS, NEW MEXICO 87020
(505) 287-4456

RETURN ORIGINAL TO PDR, HQ.

June 28, 1990



Mr. Ramon Hall, Director
Uranium Recovery Field Office
U.S. Nuclear Regulatory Commission
730 Simms Street, Suite 100
Lakewood, Colorado 80225

Re: License No. SUA-1471

Dear Mr. Hall:

Homestake Mining Company of California (Homestake) is submitting the attached Water Balances in fulfillment of license condition 35D.

The amendment request for the proposed evaporation pond was submitted June 8, 1990 for the Nuclear Regulatory Commission's evaluation. This was submitted in advance of the June 30 deadline to allow an early start of construction. Your prompt review and approval will facilitate meeting the scheduled operational date of November 1, 1990.

The attached figures display the estimated current water balance and the estimated water balance upon completion of the lined evaporation pond. Attached water flows are estimated from area annual evaporation rates, area annual precipitation rates and nonmeasured flows. In order to enhance the groundwater restoration program, we plan to increase the flows from the pumpback wells but the rates will vary based on time of year, type of water in well, weather and seasonal conditions, dust control requirements, and well production. This is shown on the Fall 1990 water balance. The attached water balances are strictly estimates based upon yearly averages and normal weather conditions.

Flow to the proposed evaporation pond is expected to allow removal of the majority of pooled water (surface water) from the large tailing impoundment within approximately one year of operation. Some pooled water will be retained on a portion of the large tailing facility for a limited time into early reclamation for interim dust control. Homestake plans to route the majority of the collection well water through the brine evaporation pond directly to the proposed evaporation pond. However, to manage the calcium carbonate precipitation from the collection wells, it may be necessary to continue the discharge of collection water to the large tailing facility, and then decant these waters to the proposed lined evaporation pond. The reduction of the saturated zone within the tailing facility will be addressed

In further compliance with license condition 35D, recharge to the scavenger ditch will be eliminated with a leach field that has been placed in operation so that no additional septic waste water will overflow to the scavenger ditch. The vanadium overflow, which previously discharged to the scavenger ditch, has been piped to the brine evaporation pond. The seepage water that has been collected by the scavenger ditch from the toe of the large tailing facility will decrease as the hydraulic head is reduced by removing the pooled water with the use of the proposed evaporation pond. Any precipitation runoff water flowing to the scavenger ditch will be pumped to the large tailing facility as soon as possible to eliminate that potential source of recharge.

Should you or your staff have any questions or comments concerning these matters, please do not hesitate to contact me.

Yours truly,

HOMESTAKE MINING COMPANY

Mark D. Hiles

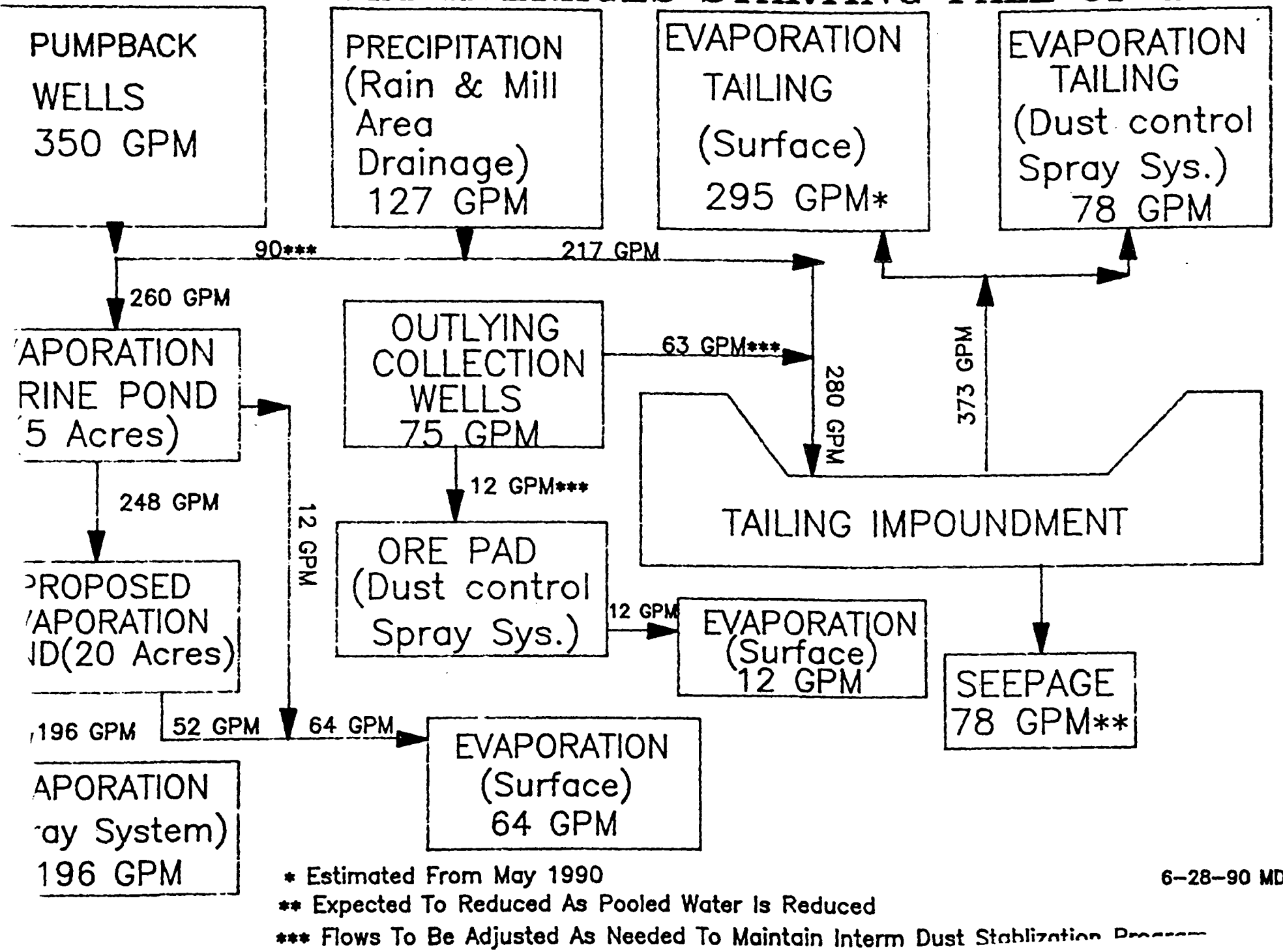
Mark D. Hiles
Radiation Protection Administrator

MDH:jg

Attachments

xc: F. Craft
D. Crouch
J. Danni
A. Kuhn
G. Hoffman

...JECTED TAILING IMPOUNDMENT WATER BALANCE
STIMATED YEARLY AVERAGES STARTING FALL OF 1990



* Estimated From May 1990

** Expected To Reduced As Pooled Water Is Reduced

*** Flows To Be Adjusted As Needed To Maintain Interm Dust Stablization Program

6-28-90 MDH

TAILING IMPOUNDMENT WATER BALANCE
ESTIMATED YEARLY AVERAGE 1990