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State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

ACT/15/002

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
James W. Carter  
Division Director

1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

September 23, 1997

TO: File

THRU: Joe Helfrich, Permit Supervisor *JH*

FROM: Sharon Falvey, Senior Reclamation Hydrologist *SFB*

RE: Sedimentation Pond Spillway Amendment, Received Sept 4, 1997, Western States Minerals, J.B. King Mine, ACT/015/002-97B, File #2, Emery County, Utah

**SYNOPSIS**

This amendment is presented to resolve design issues that resulted from a previous rainfall event. The pond received runoff from a drainage adjacent to the spillway. The spillway is located in a shallow low gradient area. Flow from the drainage enters the pond via the spillway but, the pond is not designed to receive the flow.

**ANALYSIS**

The amendment proposes to move the existing spillway away from the adjacent ephemeral drainage. Designs, design criteria, and methodologies are presented in the amendment. The proposed spillway meets minimum design criteria.

The analysis conducted in the amendment show the existing approved pond and "as-built's" do not contain the minimum runoff volume for permanent structures. The predicted runoff volume exceeds the pond volume by 1.66 acre feet. The existing pond capacity is 4.31 acre feet according to the calculations presented in this amendment. A variance from the requirement to contain the 10 year - 24 hour design event within the pond was requested, from Hansen Allen & Luce Inc, dated September 4, 1997, in a cover letter associated with the amendment. The reasons stated are summarized below:

- 1) The pond existed for 12 years without a known discharge through the existing spillway.
- 2) The spillway will remain at the existing elevation thus, no change to the existing containment volume will result.

- 3) The nearest downstream (perennial) drainage is approximately 2 miles from the site. Natural sedimentation rates in the surrounding area are (relatively) high and they stated that any additional sediment transported downstream by runoff through the pond will have negligible impacts.

The Division may approve a lesser design than the 10 year - 24 hour event according to R645-301-742.221.33. On the basis of climate or other site specific conditions and on a demonstration by the operator that the effluent limitations will be met;

No demonstration that effluent limitations will be met were presented by the applicant in the amendment. However, no effluent requirements from the State Department of Health are required at the existing pond at this time. In other words, no UPDES discharge point is associated with this pond. No discharges are known to have been observed or documented to occur from this pond.

Although the designs and maps are adequate for approval, they lack certification.

### **FINDINGS**

The amendment must incorporate the following in accordance with:

**R645-301-512.** Provide the required certification for the submitted cross sections and maps.

**R645-301-512.240.** Provide the required certification for the submitted design of the sedimentation pond as required under R645-301-742.213 and cross-reference R645-301-743.

### **RECOMMENDATION**

It is recommended the proposed modification be approved upon receipt of the requirements outlined in the findings section above. It should be noted the amendment does not identify reseeding, however, the application form identifies an area of less than 0.020 is to be reseeded.