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# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Norman H. Bangert  
Governor

Dee C. Hansen  
Executive Director

Dianne R. Nielson, Ph.D.  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340

November 5, 1991

Mr. Dwight Crossland  
84 Glen Carran Circle  
Sparks, Nevada 89431

Dear Mr. Crossland:

Re: Change of Reference Area, Western States Minerals Corporation, J. B. King Mine, ACT/015/002, Folder #2, Emery County, Utah

Enclosed please find a memo that outlines seven items that must be clarified in relation to the reference area for the J. B. King Mine.

Please submit this information to the Division by November 22, 1991.

If you have any questions, please call me.

Sincerely,

A large, stylized handwritten signature in black ink, appearing to read 'Pamela Grubaugh-Littig'.

Pamela Grubaugh-Littig  
Permit Supervisor

PGL/jbe  
Enclosure  
cc: Samuel A. Bamberg, PhD  
Susan White



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November 5, 1991

TO: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Susan M. White, Reclamation Biologist *SMW*

RE: Change of Reference Area, Western States Minerals, J.B. King Ming, ACT/015/002, Folder #2, Emery County, Utah

## Synopsis and Analysis

Western States Minerals has requested a change in reference areas. The Division agrees with the operator that the current approved reference area is not similar to the premining conditions at the mine site. The proposed reference area appears to be similar to the premining soils, aspect, elevation, and topography. The operator has submitted the results of vegetative studies for the reference area and new success standards for the reclaimed site.

Prior to approval of the proposed reference area and submitted permit changes, the items discussed in the recommendation section of this memo must be clarified.

## Recommendations

Please clarify the following:

- 1) Please delete the word "alternate" from reference area. A brief history of the reference area is appropriate; however, after that, no reference should be given to the reference area above the mine. This also includes changing maps and deleting references in the text.
- 2) Under B, Sampling Methods, paragraph 3, last sentence, "on", should this read "not"?

- 3) Please clarify, in the reference area survey methods section, what shrubs under 3 inches diameter means.
- 4) The concept of a reference area is for each reference area to represent one vegetation type. One reference area cannot represent two vegetation types. Please change this in the text.
- 5) This first reference area is 400 feet square, what are the dimensions of the shale slope reference area as described under UMC 783.19, A. Reference Area Selection?
- 6) Stratifying sampling on the reference area to reduce sample size is acceptable provided the same method is used on the reclaimed area. Please detail by map or parameters where the following areas are located on the reclaimed site: alluvial flat; sandstone outcrop; shale slope; and sandstone bluff.
- 7) My interpretation of the success standard is that the reclaimed refuse slopes will have a standard of 8% vegetative cover and all other areas will meet 18% vegetative cover. The same will follow for the appropriate productivity standards. Please clarify the text if my interpretation is not correct.

jbe  
AT015002.CRA