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# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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February 26, 1992

TO: Pamela Grubaugh-Littig, Permit Supervisor ✓

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

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

## Synopsis

Western States Minerals requested a change of Reference Areas at the J.B. King Mine on October 16, 1991. On December 6, 1991, the operator responded to the Division's review dated November 5, 1991. This memo will review the December 6, 1991 response.

## Analysis

The Divisions vegetation Information Guidelines defines a Reference Area as "an area that is similar to the community to be disturbed with respect to vegetation (cover, density, composition), soils, aspect, climate, and elevation that will be maintained and used as the standard for comparisons with the reclaimed 'disturbed' area."

Reference Area 1 has one vegetation type, but two soil types and slopes. This probably should not be considered as one Reference Area although an argument could be made in favor of one reference area. Reference Areas 2 and 3 are the same vegetation type (with minor variations in composition) and soils type (with variation in surface rock amounts) and should probably be considered as one Reference Area.

The success standards as proposed are confusing. Would the vegetative values of Reference Area 2 or 3 be used as the Saltbush/Galleta type? Would the alluvial flat or colluvial sandstone vegetation values be used as a comparison for the Shadescale/Snakeweed vegetative community? Could sample adequacy be met if the data from the alluvial flat and colluvial sandstone were combined?

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Since borrow material used to cover the refuse pile was composed of a loam or sandy loam soil type, perhaps the sandstone colluvial of Reference Area 1 should be used as the standard for the refuse pile. In my opinion, the only area comparable to the shale slope of Reference Area 2 is a small ridge east of the northern undisturbed island.

The formula presented in UMC 817.116 for total cover of the site is no longer valid. Each area shaded in Exhibit 4 must meet the vegetation standard of the comparable Reference Area.

#### Recommendations

Prior to approval of the proposed Reference Areas and permit changes, the items discussed in the analysis section of this memo must be clarified or changed. The permit is still confusing as to Reference Area success standards.

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