

# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

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March 30, 2006

TO: Internal File

THRU: Pamela Grubaugh-Littig

FROM: Jerriann Ernstsens, Ph.D., Environmental Specialist, Biologist

RE: Phase III Bond Release, UtahAmerican Energy, Horse Canyon Mine, C/007/0013, Task ID #2409

## **SUMMARY:**

The Division received an amendment, on January 3, 2006, for Phase III bond release at Horse Canyon Mine. This memo addresses the biology and land-use sections of the amendment.

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TECHNICAL MEMO

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**TECHNICAL ANALYSIS:**

# RECLAMATION PLAN

## POSTMINING LAND USES

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

### Analysis:

DWR, DOGM, and the Permittee (4/27/05) walked the reference and reclaimed sites to evaluate whether the plant density and species are adequate for the postmine land use - wildlife and grazing. The final determination was that all the sites are adequate for wildlife. Cheatgrass could be the cause of degradation of the sites because of its potential fire danger. This concern is true for all the reclaimed sites, particularly sites # 11, 13, 14.

### Findings:

Information provided in the plan meets the Reclamation - Postmining Land Uses requirements of the regulations.

## REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

### Analysis:

#### **Revegetation: Standards For Success**

The Permittee meets the vegetation requirements for Phase III bond release because of the overall performance of the six sites (see Dr. Mike King 2003/04, refer to numbers 3; 6; 7; 15/17; 16; 11/13/14). The survey (King 2003/04) results show that the plant cover (Sec. 8.4.2.6, p. VIII 42) and woody plant densities (Sec. 8.4.2.6, p. VIII 44) are not less than 90% of the standard at the 90% confidence level. Also, that the woody plant density is above 2000 stems/acre. However, the surveys show that the project does not meet the similarity agreement (Sec. 8. 4.2.6, p. VIII 43).

The MRP states that one of the success standards includes bringing the species similarity index of the reclamation project to at least 70% of the reference area. The average similarity

index was 11% for the project with a range from 4-21% for the individual sites. This average is not even close to approaching the preferred number of 70%. The seed mix, however, was not designed to directly match the species in the surrounding environment. Therefore, the Division does not expect the results to show a high similarity index between the reclaimed and reference areas. The Division also argues that the similarity index is not part of revegetation requirements as outlined in Appendix A of Vegetation Guidelines.

The Division considers that the successes for the overall project far out weight the shortcoming of the similarity index not meeting 70%. The following successes include:

- Cover is much greater than the reference area for all six sites
- Shrubs and grasses with cover exceeding 5% was greater for the revegetation sites than the reference area
- Woody plants per acre is greater than the reference area for all six sites
- DWR considers that all the sites meet the postmining land use for wildlife.

Note: DWR representative (Leroy Mead) had mentioned that he wished that all their revegetation projects looked that good.

**Findings:**

Information provided in the plan meets the minimum Revegetation - Reclamation Plan requirements of the regulations.

**RECOMMENDATIONS:**

Approve the request.