

February 25, 1987

TO: FILE

FROM: R. HARDEN ~~RD~~

RE: Mid-Term Review, Belina Mine Complex, Valley Camp of Utah, Inc. ACT/007/001, Carbon County, Utah

Mid-term review of the Belina Mine Plan complex is provided hereunder.

Review of stipulations to the mine permit:

Condition 9 - Belina Haul Road Design

The operator has submitted a reclamation plan for the Belina Haul Road which was received by the Division on January 22, 1987. The submittal consists of a report prepared by Morrison-Knudsen Engineers, Inc. as consultant for the operator.

The report provides geotechnical and hydrologic information pertaining to the existing haul road and its proposed reclamation. Further information is provided in the report pertaining to the reclamation of the road including road surface, guardrail, and culvert removal as well as topsoiling, seed bed preparation revegetation, erosion control and maintenance. Reclamation costs are also provided in the report to complete the proposal.

With regard to the geotechnical investigation provided by the consultant, several stability problems are in evidence. Stability design factor of safety for Class I Roads is cited in the regulations as 1.25. The consultant's report indicates that based on an average section for the haul road, a factor of safety of 0.908 exists. Based on the natural conditions of the area with non-cohesive materials lying at or near their angle of repose, the factor of safety determined by the consultant appears to be reasonable. Natural talus slopes in the region have a factor of safety equal to 1.0 for their given geometry.

The reclamation design for the haul road indicates a factor of safety of 1.08 which is greater than the natural talus slopes in the area.

Pre-existing conditions of the slopes traversed by the Belina Haul Road indicate unstable and unsuitable conditions for the location and installation of a Class I Road. Existing conditions indicate that the road design is not stable and not in accordance with the requirements of the regulations. Post-reclamation conditions do not meet the long-term stability requirements as intended in the regulations.

The operator is not in compliance with UMC 817.152(d)(9) which states, "The minimum safety factor for all embankments shall be 1.25, or such higher factor as the Division may specify."

It is evident from the information submitted by the consultant that the operator cannot achieve the requirements of the regulations. Further, achieved factors of safety developed and proposed are not commensurate with standard engineering practices. Variance from the above section cannot be granted from an engineering standpoint. Any variance for the design, continued use and reclamation of the Belina Haul Road will require administrative approval.

An initial recommendation for the variance is as follows:

Variance - UMC 817.153-.157

The Belina Haul Road has or potentially has hazards associated with the stability of the materials above, beneath and below the road which may cause slope failure, road failure, road blockage, mass wastage or other such effects to and around the haul road. The operator shall take adequate measures in the operation and reclamation of the Belina Haul Road such that the hazards which currently and potentially exist are made known to the extent that public and operator safety is maximized, and to the extent as is possible, that environmental damage caused by such hazards or mitigation of such hazards is minimized. As a minimum, the operator shall provide for and commit to the following:

1. Warning signs shall be placed at the entrance to the road indicating the potential for landslides and road surface failure.

2. Instrumentation shall be installed in critical areas which can be monitored by the operator and the Division in order to identify any movement within these areas or to anticipate failures. Such instrumentation may consist of stake rows across the potential slide areas, extensometers, tilt meters, or other such applications as may be approved by the Division.
3. Monitoring of critical areas by the operator shall occur at least monthly and more frequently as required during high ground moisture periods or during periods of movement in those slide areas. A monitoring plan and map showing the location of monitoring stations shall be submitted by the operator for approval by the Division.
4. In the event that a slide occurs or that failure in an area is imminent, the operator shall cease use of the Belina Haul Road and shall take whatever actions as may be necessary to mitigate the hazard prior to any traffic on or use of the haul road other than is required to rectify the hazard. Reactivation of the haul road for its intended use shall require approval by the Division.

REVIEW OF THE MRP FOR COMPLETENESS AND TECHNICAL DEFICIENCIES:

UMC 782.18 Personal Injury and Property Damage Insurance
Information - JRH

The operator currently has evidence of adequate personal injury protection and property damage insurance information on file with the Division.

UMC 800 Bonding - JRH

The Mine Plan Decision Document as as presented by OSM requires bond in the amount of \$1,521,000.00. This amount was posted by the operator and approved by the Board on August 23, 1984. The cost estimate provided by the operator and the determination of the bond amount was made in 1983 dollars. No factor was provided for escalation of the bond amount.

The Division's policy for determination of the bond amount requires that an escalation factor be built into the cost estimate, further, information provided by the operator and by OSM in determining the reclamation cost estimate is not considered adequate by the Division.

Exhibit "A", a description of the disturbed land, must be attached to the bond as required in the bond form. The operator must provide to the Division a description of the disturbed area which can be a certified map of the disturbed area including the total acreage of the disturbed area, or, a legal description of the disturbed area (meets and bounds description).

Additionally, the Division currently has on file, two additional bonds for the mine site. The first is a Board contract in the amount of \$16,000, written in 1979 and the second is a surety bond in the amount of \$190,000, written in 1983. In as much as the total bond amount required by the operator was determined to be \$1,521,000 as stated above, these additional bonds are extraneous and need to be withdrawn.

Bonding guidelines as used by the Division and changes in the rules and regulations since the operator has obtained bond warrant update of the reclamation cost estimate for bonding and may affect the total bonding amount required by the Division.

The operator shall be required to submit an up-to-date reclamation cost estimate utilizing the updated bonding regulations utilizing the bonding guidelines. Copies of both the revised bonding rules and the bonding guidelines are included with this review document. Upon completion of the cost estimate by the operator, the Division shall determine if sufficient bond is currently posted by the operator.

The revised cost estimate shall include an updated map showing the existing surface facilities, the affected area(s) and corresponding reclamation treatments for their respective areas. This map could also be used as a description for the disturbed area as required as Exhibit "A" of the bond.

In the event that the bond amount required by the Division is greater than the amount currently posted by the operator, the Division shall require the operator to increase the amount of bond. In the event that the amount of bond required by the Division is less than or equal to the amount posted by the operator, the operator may choose to reduce the amount to that required by the Division.

cc: S. Linner
1005R-104