



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

Michael O. Leavitt
Governor

Ted Stewart
Executive Director

James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

June 28, 1994

TO: Daron Haddock, Permit Supervisor

FROM: Susan M. White, Senior Reclamation Biologist *S.M.W.*

RE: Draft Review, Tank Seam Road, Bear Canyon Mine, Co-Op Mining Company, ACT/015/025, Working File, Emery County, Utah

SYNOPSIS

The entire Tank Seam Road amendment was reviewed. The most current addition to the amendment was dated received June 23, 1994. Discussed below is a review of the amendment in a Technical Analysis format. The review was based on the **assumption** that the constructed slopes and surface will be stable upon reclamation. I have relied upon **other** disciplines at the Division to evaluate this stability.

ANALYSIS

R645-301-321. Vegetation Information.

Plate 9-1, Vegetation Map, is included in the submittal for the proposed Tank Seam Road and Portal Pad. The new vegetation map has been updated to include the Tank Seam reference area. The existing vegetation in the area of the proposed disturbance is included on the map.

An inspection of the proposed road was made by Forest Botanist Robert Thompson on November 4, 1993 for threatened, endangered and sensitive plant species (page 9B-5). He stated that the area was clear of any species of concern.

R645-301-322. Fish and Wildlife Resource Information.

No additional fish and wildlife resource information specific to the Tank Seam road and portal pad was provided in this amendment. The resource information included in the permit is general enough to cover this area which is close to the other disturbed areas. The raptor survey included the proposed area of disturbance. The entire area is classified as critical deer and



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elk winter range.

A letter dated December 23, 1992 from DWR (page 10D-18) recommended the current proposed road route over other alternative routes because of less impact. The letter states that the known golden eagles nest within one-half mile of the road are not located in direct line of site. However, the lower cliff areas are potential Townsend's Big-eared bat habitat. A survey of the area for this species must be complete prior to construction of the road and pad as required by R645-301-322.100.

R645-301-410. Land Use.

No amendment to the plan has been made for this section. The stated premining land use for the area is wildlife and grazing. R645-301-411.110 requires the amendment to state the current land use for the area which in this case would be only wildlife. Due to the steepness of the site, livestock grazing would be prohibitive.

The current productivity of the area to be disturbed has not been described as required by R645-301-411.100. The Division will accept a letter from the SCS which states the estimated current and potential productivity of the reference area to fulfill this requirement.

R645-301-330. Operation Plan.

The amendment contains statements that the road fill material will be roughened, seeded and have erosion control matting installed to prevent erosion (page 3H-9). This commitment is a necessary interim step during the operational phase to control erosion and comply with R645-301-331. However, to achieve full compliance with the regulation and the approved permit, the amendment must commit to seeding the cut slopes.

R645-301-340. Revegetation.

Reclamation will be scheduled to allow revegetation of the Tank Seam road and pad in conjunction with backfilling and grading (page 3-108). Methods used for seedbed preparation are to use the bucket of the backhoe for ripping and scarifying to create horizontal pockets to aid in water retention (page 3-109). No further detail is given as to scarification. R645-301-341.220 requires the plan to contain sufficient detail so that the Division can make a finding of reclaimability. The plan must describe or illustrate the density and dimensions of the "horizontal pockets" that will be created during reclamation.

Seeding methods are unchanged with this submittal (page 9-14). The amendment states that the area will be mulched and then have erosion control matting applied. The amendment fails to state what mulch will be applied. R645-301-341.230 requires the plan to state the rate and type of mulch to be used.

The performance standards require mulch and other soil stabilizing practices to be used on all areas which are topsoiled. The amendment does not fulfill the requirements of R645-301-355 because the methods of soil stabilization are not described. The amendment does commit to the use of erosion control matting, however this is a temporary measure and does not provide for long-term control. The vegetative cover of the reference area is approximately 31 percent. The plan cannot rely on vegetation alone to control erosion on 2:1 and steeper slopes. Previous discussions have included the use of well placed and numerous boulders to provide the additional ground cover needed to control erosion. However, the amendment does not commit to the use or detail the installation and density of the boulders. This detail must be included in the amendment.

The success of the revegetation cover, shrub density and diversity of the reclaimed Tank Seam road will be compared to a grass reference area which is adjacent to and above the proposed portal pad area. This reference area is described in Appendix 9A and located on Plate 9-1.

R645-301-342. Wildlife Enhancement

The Tank Seam road and portal pad amendment will use the same wildlife enhancement methods as described in the approved plan.

FINDING/RECOMMENDATION

The deficiencies associated with surface stabilization is critical to a finding of reclaimability. All other deficiencies could probably be addressed without affecting this finding. Of most importance is the **assumption** that I have made throughout the review that the topsoil and constructed reclaimed slopes will be stable. Listed below are outstanding deficiencies associated with the Tank Seam amendment.

- Adjacent to the proposed area of disturbance is potential Townsend Big-eared bat habitat. As required by R645-301-322.100, a ~~survey for the bats' presence must be conducted~~ ^{information} ~~prior to construction.~~ ^{should} ~~a letter from DWR, stating the disturbance~~ ^{must be included in the plan} ~~should not impact the bats.~~
- R645-301-411.110 requires the amendment to state the current ^{which demonstrates that}

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land use for the proposed Tank Seam road and pad. No new information was submitted in the amendment for land use. The plan states that the land use is grazing and wildlife which is incorrect for the road and pad area.

- The current productivity of the area to be disturbed has not been described as required by R645-301-411.100.
- The amendment must commit to interim stabilization of the cut slopes through prompt establishment of vegetation as required by R645-301-331.
- The plan fails to state the rate and type of mulch to be used in final reclamation. R645-301-341.230 requires the rate and type of mulch to be stated.
- ~~□ The amendment does not fulfill the requirements of R645-301-355 because the methods of permanent soil stabilization are not described. Thus, the requirements of R645-300-133.710, reclamation, are not met.~~

cc: Henry Sauer
Tom Munson
Jesse Kelley