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

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September 13, 1999

TO: File

THRU: Mike Suflita, Project Lead

THRU: Daron Haddock, Permit Supervisor

FROM: Paul Baker, Reclamation Biologist

Re: Proposal to Remove a Culvert on the Haul Road, White Oak Mining and Construction, White Oak Mine, ACT/007/001-AM99B, Folder #2, Carbon County, Utah

SUMMARY:

On October 8, 1998, the Division approved the removal of a culvert along the lower end of the haul road to the White Oak Mine. The permittee had also proposed reclamation work in this area, but because there were still deficiencies in the reclamation plan, this was not approved. White Oak has now modified the reclamation plan and is seeking approval to do this work.

TECHNICAL ANALYSIS:

OPERATION PLAN

INTERIM REVEGETATION

Regulatory Reference: R645-301-331

Analysis:

The applicant previously gained approval to remove a culvert near the lower part of the haul road leading to the White Oak Mine and has reportedly done this work. The current proposal is a reclamation plan specifically for the culvert area. There has been erosion on the slope, and there is sediment deposited at the bottom of the slope. Previous attempts to control erosion have apparently included installation of log check dams and erosion control matting.

The applicant proposes to remove previously-placed erosion control blankets and to fill eroded areas with material from adjacent areas. The slope will be repaired using heavy equipment when possible, but the majority of the work will be done by hand.

The applicant prefers to use soil material from areas adjacent to the culvert to fill the depression rather than taking it from a topsoil stockpile. While this would increase the size of the disturbance on the steep hill side, the disturbance would be minimized by using hand tools. There is already a shortage of topsoil at the mine, and there is no available fill.

The filled depression will be left in a roughened condition. The slope will be hydroseeded or broadcast seeded, and an erosion control mat will be stapled to the slope using the manufacturer's recommendation. At the top of the slope and where the mat overlaps, at least twice the number of staples specified by the manufacturer will be used. The mat will be a permanent mat.

Although disturbing a larger area is not desirable, the material on the slope is probably more resistant to erosion than the topsoil. Also, the topsoil will be needed for final reclamation, and using hand tools really should decrease the amount of additional disturbance.

The erosion control mat needs to be anchored with more than staples at the top and where sections overlap. This is a very steep hill, and the upper ends need to be buried in trenches.

The seed mix in the application includes two rhizomatous grasses and other species that can help control erosion. This mixture meets regulatory requirements. If the applicant feels additional erosion protection is needed, the Division would be willing to approve the use of one or two introduced species, such as smooth brome, intermediate wheatgrass, or tall wheatgrass.

Because of the erosion control mat, it should not be necessary to rake the area to get better seed-soil contact.

At the bottom of the hill is an area that has been covered by sediment, and the applicant has proposed to seed this area with the same seed mix as is being used for the hill. Willows would be added at the rate of 500 per acre. Because this area is near a spring and because the sediment is not too deep, it appears the willows would probably survive and become part of a small wetland. Using this option, vegetation already growing in the site and adjacent areas would not be destroyed.

Findings:

Information provided in the proposal is not considered adequate to meet the requirements of this section of the regulations. Prior to final approval, the applicant must supply the following in accordance with:

R645-301-331, The erosion control mat needs to be well anchored, and staples alone, even at a high rate, would be unlikely to hold the mat. The applicant needs to show how these mats will be adequately anchored by burying the upper ends in a trench or by other means.

RECOMMENDATIONS:

The proposal should not be approved in its present form.