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State of Utah
DEPARTMENT OF NATURAL RESOURCES
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October 5, 1998

TO: File

THRU: Daron Haddock, Permit Supervisor *DH*

FROM: Paul Baker, Reclamation Biologist *PB*

RE: Reclamation Plan Review, Hiawatha Coal Company, Hiawatha Mine, ACT/007/011-DO97A, Folder #2, Carbon County, Utah

SUMMARY:

In accordance with Division Order 97A, Hiawatha Coal Company has proposed changes to its mining and reclamation plan. The permittee has modified its revegetation plan and included a plan to remediate damage to areas affected by coal fines. It has proposed to change some of the reference areas, and while these changes are acceptable, two maps show different locations for one of the reference areas. The plan for interim revegetation is not adequate and needs to be modified.

TECHNICAL ANALYSIS:

OPERATION PLAN

INTERIM STABILIZATION

Regulatory Reference: R645-301-331

Analysis:

Chapter 3 of the plan discusses interim revegetation plans for certain types of areas. A mix of intermediate wheatgrass and alfalfa would be used for long-term interim revegetation, and a winter grain, such as barley, would be used for short-term revegetation. This plan is adequate except that the planting rate specified for the winter grain is very low. The "Interagency Forage and Conservation Planting Guide for Utah" recommends planting grains at the rate of 80 pounds per acre for temporary revegetation. The interim revegetation plan needs to be changed to show a higher seeding rate for grains.

Findings:

The mining and reclamation plan does not meet the requirements of this section of the regulations. The permittee needs to make the following changes:

R645-301-331, The response to the Division Order says the permittee will plant 20 pounds per acre of annual grain for temporary stabilization. This rate needs to be increased to at least 80 pounds per acre.

RECLAMATION PLAN

REVEGETATION

Regulatory Reference: R645-301-341

Analysis:

The revegetation methods in the plan have been previously reviewed. The permittee may want to make some adjustments to the seed mixes depending on the results of 1996 and 1997 revegetation efforts.

A few areas near the refuse piles are within the disturbed area but are not disturbed in the sense that topsoil and vegetation have been removed. They have natural vegetation, but they have been heavily affected by wind-blown coal fines. The permittee has committed to mitigate this disturbance in two areas shown on Exhibit V-9C. In Chapter 5, Section R645-301-541 under the heading "Hiawatha Processing Plant and Waste Disposal Sites Reclamation," the permittee commits to vacuum or scrape the areas to remove fine coal particles then scarify and reseed them. While the plan does not specify which seed mixture would be used to seed the area, seed mix 2 is for use on refuse disposal areas and would be appropriate for these areas. Other aspects of this remediation plan are acceptable.

Other areas besides those shown on Exhibit V-9C have also been affected by coal fines, but, as far as the Division is aware, none of these either need to be or should be remediated. In some areas, there are very few fines. In other areas, although there may be quite a few fines, it appears there would be more damage than benefit from remediation.

To reduce compaction in the upper layers, refuse materials will be ripped about every five feet to a depth of 18-24 inches. In the past, the refuse has been ripped at much greater intervals.

Hydroseeding and broadcast seeding will be the preferred seeding methods, but drill seeding could also be used. If drill seeding is used, the Division will be contacted to determine if additional measures are needed during planting since some species require a shallow seeding depth.

With the Division and the Natural Resources Conservation Service (NRCS), the permittee has examined some of the existing reference areas and proposed different areas to be used as revegetation success standards. These and all other reference areas and the areas to which they will be compared are shown on Table III-9. A letter from the NRCS showing production and site conditions of the reference areas (except MCR2) is in Appendix III-3.

It was impossible to locate reference area SBR3, so a new reference area was marked in the field and evaluated by the NRCS. While this area is dominated by basin big sage, it does have grass and forb understory, and the NRCS rated the range condition as "good." Exhibits III-4 and III-5 show this reference area in different locations, and this needs to be corrected.

The other new reference area is a riparian area in South Fork. The site condition was rated as "fair" which is adequate for using it as a revegetation success standard. This area will be used for comparison to areas near reclaimed stream channels at the King 4, 5, and 6 Mines.

Other reference areas had been previously established but were evaluated by the NRCS representative. SBR12 was in "fair" condition," and MBR1 and PJR4 were both in "good" condition. The only area not rated was the mixed conifer reference area in Middle Fork which still had snow on it at the time of the evaluation. This reference area was previously evaluated, and it is not anticipated the rating would change.

The reference areas all have vegetation typical of the area although portions of SBR3 have been previously disturbed. Since all of the reference areas are in fair or better condition, they are considered acceptable success standards. Reference area PJR5 has been deleted.

Findings:

Information provided in the proposed amendment is not considered adequate to meet the requirements of this section of the regulations. Prior to approval, the permittee must provide the following in accordance with:

R645-301-341, The location of reference area SBR3 is shown in different locations on Exhibit III-4 and III-5. This needs to be corrected.

RECOMMENDATIONS:

Hiawatha Coal Company has fulfilled most of the requirements of the biology portions of Division Order 97A, but some changes need to be made. The response to the Division Order should not be approved until the corrections are made.