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 DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF OIL, GAS AND MINING

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TO: Daron Haddock, Permit Supervisor

FROM: Paul Baker, Reclamation Biologist *PAB*

RE: Draft Review, Reformatted Mining and Reclamation Plan, Banning Siding Loadout, Soldier Creek Coal Co., ACT/007/034, Working File, Carbon County, Utah #2

SYNOPSIS

For the Banning permit renewal in 1993, the Division received a reformatted operation and reclamation plan. The first submittal was a draft and incomplete, but, nevertheless, it was reviewed for technical adequacy. The current plan is an attempt to respond to inadequacies noted in the previous review.

This review only discusses portions of the plan found to be deficient. Most of these issues were raised in the previous review. Problems found in the previous review of Chapter 4 have been corrected.

Chapter 1 was not reviewed. It does not appear that this section has been updated since the last review.

ANALYSIS

R645-301-330

Operation Plan

Analysis:

The plan says Soldier Creek has disturbed only those areas deemed necessary for coal handling. All available support facilities have been hydroseeded and mulched with an interim seed mix.

The plan does not contain a plan for interim revegetation. Components of the final revegetation plan have been used for interim seeding in the past, but the plan should contain specific interim revegetation methods.

Findings:



The operation and reclamation plan needs to contain interim revegetation methods.

R645-301-341

Revegetation

The plan says the mulch to be applied is 2000 pounds per acre of wood fiber. Mulch will be anchored by crimping. Crimping wood fiber is unusual and may decrease its effectiveness. Although this may not be a deficiency in the plan, the Division recommends that the operator check this commitment for accuracy.

Under section R645-301-341.300, the plan says a test plot was installed to evaluate the efficacy of the proposed reclamation methods. The plan references Appendix 3-4 for the test plot information. No Appendix 3-4 was found in the plan. Test plot plans are in Appendix 7. Also, the plan says the test plot was established in November 1988. There may have been a test plot established in 1988, but the current test plot design was implemented in 1991.

In the fish and wildlife habitat enhancement section, the plan says the sediment pond will be maintained through the life of the operation and bond liability period at which time the pond will be allowed to pass through normal pond succession as allowed by R645-301-733.220. A pond that contains water during dry portions of the year would definitely enhance wildlife habitat in the loadout area, but the plan does not meet regulatory requirements to retain the pond. Chapter 7 of the plan says the pond will be reclaimed. To retain the pond, Soldier Creek would need to demonstrate that the pond would meet the requirements of R645-301-733.220. Otherwise, the operator needs to commit to reclaim the pond.

The plan discusses success standards for cover, woody plant density, and productivity, but it does not mention standards for other requirements contained in R645-301-353, such as diversity, seasonality, effectiveness in controlling erosion, and permanence. The regulations and "Vegetation Information Guidelines" give specific standards for some of the parameters contained in the performance standards of the regulations, but they are not specific in other areas. Therefore, the plan needs to contain standards for success that have been approved by the Division for these other parameters.

The plan states that comparisons of the revegetated area and the reference area will be made using the data obtained from the ninth and tenth year sampling. R645-301-356.232 states that 80% of trees and shrubs used to show the adequacy of stocking and planting arrangements will have been in place for 60% of the liability period and that no trees or shrubs in place for less than two years can be counted toward meeting the standard for success. This requirement necessitates sampling for woody plant density in the fourth and eighth years of the bond liability period.

The previous review indicated that vegetation in the test plots was not doing well. On some of the plots, Gardner saltbush has grown very well this year, and crested wheatgrass is still alive in some of the supplemental plots. In September 1994, Soldier Creek seeded a small area near the substation and the pond. The seed mixture included species from the primary mixture and from the alternative species shown in Table 3-3. About two inches of rain fell a few days after this seeding, and many of the grasses emerged. Cool weather prevented the soil from drying. If these seedlings can survive the winter, they should provide very good vegetative cover in the spring. Weeds should be outcompeted by the established grasses, but shrubs will probably not be able to become established. Depending on survival of these grasses, this sort of revegetation scheme could be a model for final revegetation. However, it could be necessary to have "artificial precipitation," ie. irrigation.

Findings:

References to Appendix 3-4 as the test plot design need to be corrected. Also, the current test plot was implemented in 1991. The 1988 test plot has been superseded.

The plan needs to contain standards for success for diversity, seasonality, and effectiveness in controlling erosion.

The plan needs to include provisions to sample revegetated areas for woody species density in the fourth and eighth years of the bond liability period.

The plan to retain the sediment pond is not approvable in its current form. Soldier Creek would need to adequately address the requirements of R645-301-733.220. However, if the pond would store water during dry parts of the year, retaining it would constitute very useful wildlife habitat enhancement.

RECOMMENDATIONS

Chapter 3 of the Banning Siding Loadout operation and reclamation plan contains deficiencies that need to be corrected, but the Division can accept the plan with the requirement to correct these problems.