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

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March 29, 1995

#2

TO: Daron Haddock, Permit Supervisor
FROM: Susan M. White, Senior Reclamation Biologist *SMW*
RE: Reclamation Proposal, Mountain Coal Company, Gordon
Creek 2, 7, & 8 Mines, ACT/007-016, Folder #2, Carbon
County, Utah

SYNOPSIS

The Reclamation Plan, dated received January 31, 1995, for the Gordon Creek No. 2, 7, & 8 Mines was reviewed. The analysis of the plan is outlined below in a Technical Analysis format.

ANALYSIS

POSTMINING LAND USES

Regulatory Reference: R645-301-412, 301-413

Analysis:

The stated premining land use is wildlife habitat to which the postmining land use will be restore to (page 3-8). Private landowners presently manage the lands surrounding the mine site for limited livestock forage. There are no range improvements in the area (page 4-53). Reclamation activities are designed to restore the post mining land use. No surface owner comments concerning the proposed use were observed in the permit except for the Sweet's Pond area.

Coal mining has been a land use in the area since the 1900's. The larger mines to be opened in the area were Sweets in 1925, Consumers in 1928 and National in 1928 (page 5-19). The Swisher No. 1 Mine is immediately adjacent to the disturbed area and was reclaimed by the Utah Abandoned Mine Lands program.

Sweet's Canyon Water Fill Area, "Sweet's Pond", will not be reclaimed. The pond is located on private land and the land owner has request that the pond be left intact for private use (Page 3-32 and Appendix 3-5). The land owner has committed to



leave the fence in place in order to exclude livestock from the pond and riparian area. The pond will provide a utility improvement for the area, supports a fish population and provides for wildlife habitat. Page 4-11 of Table 4-1, Surface and Mineral Land Status, show that Carbon County is the owner of the surface in the area of Sweet's Pond and that E. E. Peirce owns the water. Surface ownership must be clarified.

Findings:

The permittee must provide the following, prior to approval, in accordance with the requirements of:

R645-301-412.200, the permittee must provide a copy of the comments concerning the proposed use by the legal or equitable owner of record (Grant, Jewkes, and Jewkes and Calvin Jacob & Sons Partnership) of the surface of the proposed use of the land following reclamation. Additionally, the permit must provide evidence that E.E. Pierce was the owner of Sweet's Canyon Water Fill Pond and surrounding area or provide comments from the legal owner.

PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES

Regulatory Reference: R645-301-333, 301-342, 301-358

Analysis:

Wildlife enhancement measures to be included in the reclamation of the site are listed below.

1. A small native rock holding basin will be constructed for wildlife watering near the No. 8 Mine seep.
2. A fence will prevent livestock grazing of the revegetated area for the entire liability period.
3. Seeps at the No. 7 Mine will surface and be available for wildlife use.
4. The revegetation plant species have been selected for their wildlife forage and cover value.
5. Drainage and seep area vegetation will be enhanced with the addition of seeded and transplanted riparian species.

Findings

The permittee is in compliance with the requirements of this section.

REVEGETATION

Regulatory Reference: R645-301-244, 301-353, 301-355, 301-356

Analysis:

General requirements.

The revegetation portion of the plan is found on pages 3-52 thru 3-65. The revegetation seed mixture is specified on page 3-54 and 55. The mixture contains grasses, forbs, and shrubs which are known to be palatable to big game animals. Cicer milkvetch and alfalfa are the only non-native species proposed in the mixture. Cicer milkvetch is used because it is a legume and also known for its palatability to big game animals. Alfalfa is desirable for its quick establishment and nitrogen fixing capabilities. Alfalfa usually does not persist on these sites for more than a few years. Five other native forb species are included in the mixture. Besides five shrubs species to be seeded the riparian areas will also be transplanted with containerized stock of Salix, Elderberry, Serviceberry and Chokecherry (page 3-55). Seeps and springs will be planted at 25 foot intervals, and the main drainages will be planted at 50 foot intervals (each side). The riparian areas will have an augmented seeded mixture applied which includes additional grass and forb species.

All seeding will be done by broadcast methods. Either hydroseeding or hand broadcasting methods and followed by light raking (page 3-53). This method has been found to be effective for this area from past interim seeding efforts. A commitment is made to limit the amount of time the seed is in the hydroseeder to 30 minutes.

A commitment is made in the plan to leave the site in a roughened state (page 8-32). By using a large backhoe bucket to redistribute the topsoil, depressions 2' to 3' in diameter will be left. The areas which are not backfilled and will not have topsoil redistributed will be amended with 1500 pounds per acre straw or hay. The organic amendment will be incorporated into the soil with a trackhoe. In unaccessible areas incorporation will be by punching and gouging the soil (page 3-51). Hand roughening will consist of surface loosening of the soil to a depth of 4 to 6 inches by use of hand tools.

Revegetation: Timing.

The plan commits to seeding no sooner than September 1 (page 3-54) and to complete the seeding in the fall of the year. This is the normally accepted time of year for seeding with this particular seed mixture and for this area. The revegetation schedule is outlined on page 3-57. Preliminary work will begin in May such as seed orders and soil sampling in June. Recontouring will begin in July with final mulching occurring in October.

Revegetation : Mulching and other soil stabilizing practices.

A hydromulch will be applied to all seeded areas with slopes less than 2:1 and on nontopsoiled slopes greater than 2:1 (page 3-58). Hydromulching has been effective in controlling erosion and stabilizing the soil surface on slopes less than 2:1 during interim revegetation on site. Erosion control matting will be used on topsoiled slopes which are 2:1 or greater. However erosion control matting is not expected to be used on site. Most slopes 2:1 or steeper will not be topsoiled.

Revegetation: Standards for success.

The postmining land use is wildlife habitat. Therefore, the requirements of R645-301-356.230 must be met. Success of vegetation will be determined on the basis of shrub stocking and vegetative ground cover. The plan does not specify a shrub standard. The Division, DWR and the permittee have decided that a minimum shrub stocking standard of 2000 shrubs per will be the success standard for this site to achieve (correspondence dated 10/31/94, from Bill Bates, DWR, page 3-58). The commitment is made on page 3-61 of the permit. The stated success standard for the cover and diversity requirement is to use the Mountain Grassland community (page 3-58).

The Mountain Grassland (also referred to as Mountain Brush/Grass Community) reference area is located above the No. 2 Mine and identified on Plate 9-1. The data for this reference area was collected in July, 1981. The most frequent species in the reference area during the 1981 inventory were Salina wildrye and Indian ricegrass. Based on an ocular estimate total vegetative cover was 20 percent. In 1993 the Mountain Grassland reference was again sampled and the vegetative cover was estimated at 43 percent cover (Appendix 9-2). Salina wildrye and Broom snakeweed were the most frequently encountered plants. Because of the large difference in percent cover values some doubt exists that the same areas were sampled. However, approval of the reference area is based on the 1993 sampling. If subsequent sampling indicated the 1981 sampling to be more representative of the cover value then the use of the Mountain Grassland reference area as a standard for the entire site must be reevaluated.

The proposed 2/7/8 Sediment Pond is to be constructed in an area which has not been included in the current approved disturbed area. However the area was previously disturbed by the County Road construction and the abandoned Swisher No. 1 Mine. The plan commits to including this area in meeting the success standard of the Mountain Grassland reference area. A determination will be made during the growing season as to the need of a vegetation inventory prior to disturbance.

Findings:

At this writing the permittee is in compliance with the requirements of this section. However, during the growing season a determination will be made as the need of a predisturbance vegetation inventory of the propose 2/7/8 Sediment Pond.

cc: Jesse Kelley

H:GC278.SUE