



State of Utah
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 DIVISION OF OIL, GAS AND MINING

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TO: Joe Helfrich, Permit Supervisor

FROM: Susan M. White, Senior Reclamation Biologist 

Re: Seed Timing Amendment, Mountain Coal Company, Gordon Creek 2, 7, & 8 Mines, ACT/007/016-95A, Folder #2, Carbon County, Utah

SYNOPSIS

A permit amendment (95A), dated received October 31, 1995, for the Gordon Creek No. 2, 7, & 8 Mines was reviewed. The amendment proposes to change the requirement of no seeding prior to September 1 to seeding whenever the topsoil is prepared. The analysis of the amendment is outlined below in a Technical Analysis format. The amendment must be denied.

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 nonnative 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 drainage 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. Amendment 95A proposes to eliminate the requirement for light raking. Proper seed/soil contact is essential for germination. Light raking provides for this contact especially after soil has set or crusted.

Revegetation: Timing.

The plan commits to seeding no sooner than September 1 (page 3-53) and to complete the seeding in the fall of the year with seeding occurring as soon as possible after final site preparation. This is the normally accepted time of year for seeding with this particular seed mixture and for this area. Several of the proposed forb and shrub species seed require a cold stratification prior to germination. Seeding as soon as possible after final site preparation is important to insure a good seedbed while not allowing a seed bank of weed seed to develop which will compete with the desired species.

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 seedbed preparation occurring in September. A new schedule has been proposed with the amendment to allow for all revegetation work to be done as the earth work is completed.

Amendment 95A deletes the requirement for fall seeding and allows seeding anytime after site preparation. The amendment fails to recognize the problems with seeding during unfavorable planting times such as: requirement for seed stratification; rodent and bird predation; seed soil moisture requirements; and weed competition. The Division and other experts agree that seeding during early spring can meet the stratification and moisture requirements for seed germination if done early. However, this seeding window is limited to conditions usually to wet for equipment and ends by mid April. The amendment proposes to commit to an evaluation of seeding success in the fall of 1996 and to reseed and plant containerized stock if indicated by the evaluation. However, the Division cannot make a finding of compliance that the performance standard of R645-301-354 is met. This performance standard requires that the disturbed areas will be planted during the first normal period for favorable planting conditions. The normal period for favorable planting is that planting time generally accepted locally for the type of plant materials selected.

FINDINGS:

Amendment 95A is denied in accordance with the requirements of:

R645-301-354 disturbed areas will be planted during favorable planting conditions after the replacement of the plant-growth medium. The amendment proposes to seed at any time after site preparation. Conditions specific to the Gordon Creek area limit the favorable time of seeding to fall and early spring. The Division will consider an early spring planting as meeting favorable conditions.

R645-301-341 accepted methods for broadcast seeding require raking or other type of method to ensure soil/seed contact.

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cc: Dave Darby
H:GC278.95C