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STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

ACT/007/022#2

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September 14, 1987

Mr. Dan Guy, Manager  
Beaver Creek Coal Company  
Permitting & Compliance  
P. O. Box 1378  
Price, Utah 84501

Dear Mr. Guy:

Re: C. V. Spur Test Plot Approval, Beaver Creek Coal Company, C. V. Spur, ACT/007/022, Folder #2, Carbon County, Utah

This letter confirms our phone conversation on September 9, 1987, concerning the C. V. Spur test plots. The design of the test plot is approved as proposed, with the following conditions:

1. The test plot treatments shall be duplicated using a randomize design.
2. The following species shall be incorporated into plot #8 and tested on an individual basis for adaptability to the site for possible use in future seed mixes. The species are:

| <u>Scientific Name</u> | <u>Common Name</u>   |
|------------------------|----------------------|
| Agropyron Smithii      | Western Wheatgrass   |
| Agropyron Cristatum    | Crested Wheatgrass   |
| Agropyron Elongatum    | Tall Wheatgrass      |
| Agropyron Trichophorun | Pubescent Wheatgrass |

It is also suggested that Beaver Creek Coal Company (BCCC) try planting bare root stock or containerized plants of the shrub species proposed in the seed mix. These could be planted in the fall or early spring to test survival rates. Five plants of each species should be planted.

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After the proposed three year monitoring period, if success is not evident to the Division, from data provided, BCCC must repeat the test plots using other treatments and incorporating procedures and species which were successful initially. Other treatments may include different mulching materials, rates or incorporating techniques, other adaptable species, and irrigation treatments.

Technically, the Division believes irrigation may be the best treatment for success in the permit area because of the dry, saline environment. The Division agrees with Beaver Creek that test plots should not test too many treatments, that the plots become unmanageable, and that initial plots should test treatments that require the least amount of management.

If irrigation treatments are to be used in subsequent plots, the plan should be for a two year irrigation period, to leach salts from the root zone and to establish plants. In the first year, enough water should be applied to leach salts out of the root zone and to prevent salts from raising back up into the root zone in the evaporational stream. This will also provide adequate soil moisture to encourage plant establishment. In the second year, water should be applied twice; first, early in the growing season for adequate soil moisture, and then again later in the season after plants have gone through a drying cycle. This will help harden plants for survival in the dry climate. When planning an irrigation program the irrigation water quality must be considered to establish the proper leaching fraction for the soils present. Drainage conditions of the soil profile and the timing and duration of irrigation must also be considered.

If I can be of any help, please feel free to contact me.

Sincerely,



Dan Duce  
Reclamation Soils Specialist

DD/djh  
cc: J. Whitehead  
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