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State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter  
Governor  
Dee C. Hansen  
Executive Director  
Dianne R. Nielson, Ph.D.  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340

October 3, 1991

Mr. Kevin Cheeks  
Supervisor EQC  
Consolidation Coal Company  
12755 Olive Boulevard  
St. Louis, Missouri 63141

Dear Mr. Cheeks:

Re: Approval, Seed Mix Amendment, Consolidation Coal Company, Emery Deep Mine, ACT/015/015-91D, Folder #3, Emery County, Utah

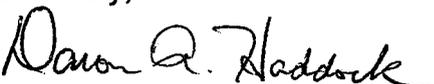
The submittal received on September 26, 1991, regarding the above noted permitting action was reviewed and found to be complete and adequate by Paul Baker, Reclamation Biologist, of the Division's technical staff.

The Division hereby approves the above referenced action, with the following conditions:

- 1) Revegetation must be monitored qualitatively for at least the first three (3) years.
- 2) Consol must attempt to obtain seed of local ecotypes of the species listed.

Please refer to the enclosed technical memo which further discusses these requirements. Thank you for your cooperation in resolving this matter.

Sincerely,

  
Daron R. Haddock  
Permit Supervisor

mbm

Enclosure

cc: P. Baker, DOGM  
S. Demczak, PFO

EMERYSED.MIX



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TO: Daron Haddock, Permit Supervisor

FROM: Paul Baker, Reclamation Biologist *PAB*

DATE: September 30, 1991

RE: Seed Mix, Topsoil Stockpile Seeding Amendment, Consolidation Coal Company, Emery Deep Mine, ACT/015/015, Folder #2 Emery County, Utah.

## SUMMARY

Consolidation Coal Company has submitted an amendment to its MRP to change the contemporaneous seed mix and to show that it will be applied on the topsoil stockpiles. This seed mix was developed after viewing the test plots and some of the topsoil piles that have had at least moderately successful revegetation. The test plots were not to be monitored after this year, but Priscilla Burton and I have felt that some continued experimentation and monitoring is justified due to the lack of success on most of the plots.

## TECHNICAL ANALYSIS

### R614-301-234. Topsoil Storage

#### Applicant's Proposal:

The amendment proposes to plant the contemporaneous reclamation seed mix on the topsoil stockpiles to protect them from wind and water erosion. Correspondence received with the amendment states that the seedbed for the stockpiles will be prepared by creating depressions approximately 6 inches deep and 4 to 5 feet square. One to two tons of native hay mulch will be applied and crimped either mechanically or by hand.

#### Compliance:

The applicant is in compliance with this section. Using native hay as a mulch can be a source of seeds of both beneficial and undesirable species. Weed control may be necessary if noxious weeds become established.

### R614-301-341.300. Revegetation Feasibility

#### Applicant's Proposal:

The test plots at Emery Deep were established in 1984 and reworked in 1987. Some successes have been noted, but most of the plots have had poor vegetative cover.

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Successes have largely been due to depressions in the general topography rather than any particular seed mix or other treatment.

Compliance:

The methods proposed to establish vegetation on the topsoil stockpiles represent new variations on what has been tried in the past at the site. Information gained from these methods could be valuable when final reclamation is performed. Consol must commit to annual qualitative monitoring of the topsoil stockpiles. This monitoring need only be a paragraph with general observations on species present and what methods appear to be effective. This information must be included in the annual report for at least the first three years.

**R614-301-353.120.**

**Seed Mix Composition**

Applicant's Proposal:

The applicant has changed its contemporaneous reclamation seed mix according to recommendations supplied by the Division. These species have been successful either on other topsoil stockpiles or on the test plots.

Compliance:

The species shown in the mix are adapted to the site and should provide cover that will protect the topsoil stockpiles as well as possible for this site. These species, however, are widely distributed and have ecotypes that may not be adapted. The applicant must attempt to obtain seed that is from the general area or otherwise adapted. For future projects, Consol should attempt to foresee its needs and order seed at least one year in advance.

**RECOMMENDATIONS**

The changes that Consol has proposed should be approved with the conditions stated:

- 1) The revegetation must be monitored qualitatively for at least the first three years.
- 2) Consol must attempt to obtain seed of local ecotypes of the species listed.

If the methods proposed are not successful in establishing cover, it may be necessary to use other vegetation/soil management techniques in the future.