0016

ACT/007/007
#4

STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

November 17, 1986

Mr. Martin P. Holmes
Kaiser Coal Corporation
102 South Tejon Street
Suite 800
Colorado Springs, Colorado 80901-2679

Dear Mr. Holmes:

RE: Temporary Seed Mix for Sunnyside Mines, ACT/007/007, Folder No. 4, Carbon County, Utah.

There has been considerable discussion recently on seed mixes for temporary revegetation at the Kaiser Coal Company operations, including the Sunnyside Mine, Horse Canyon, Number 5 Mine and Wellington Prep Plant. Division staff have discussed the issues among themselves and with Susan Hasenjager. The following is the Division's position on interim seed mixes:

1. In most situations, similar techniques and materials should be used in interim and permanent reclamation for several reasons:

    a. Interim reclamation is often in place for 30 years or more and fulfills the same function as a permanent reclamation area.

    b. Field trials in a variety of slopes, aspects, soil conditions, etc. are important for evaluating permanent reclamation materials and techniques before they are applied to large areas.

    c. Interim seedings will provide a soil seed source even if major regrading is considered.

    d. Successful interim reclamation may be accepted as permanent reclamation if it does not conflict with requirements for AOC or other reclamation plans. Problems in accepting these areas for final reclamation will be minimized if an acceptable permanent seed mix is used.

There are of course situations which will be exceptions to each of these reasons. Consideration can be given to them on a site by site basis.

2. An acceptable and inexpensive interim mix can usually be a subset of the permanent mix. Where several small areas of a number of different vegetation types or different operations may be seeded at the same time, it would be advantageous to have a basic interim mix which would be suitable for most sites. Inclusion of an additional species or two could easily be approved on a site specific basis. The addition might be an introduced species where the surrounding land contains significant amounts of it (e.g., chained and reseeded area), or for a specific wildlife use.

3. The regulations on use of introduced species (UMC 817.112) apply to interim as well as permanent seed mixes.

   a. Introduced species can be justified if they are "...necessary to achieve a quick, temporary and stabilizing cover that aids in controlling erosion..." (UMC817.112(b)). Emphasis is added to the word "necessary". An introduced species cannot be justified in a seed mix just because it is capable of performing this function if a native species will serve the same purpose or if "quick" and "temporary" are not the primary consideration.

   b. For interim and permanent seedings, introduced species must be compatible with the plant and animal species of the region (UMC817.112(d)) and

   c. For permanent reclamation, introduced species must be able to "establish a diverse, effective and permanent cover capable of achieving the postmining land use" (UMC817.112(a)). Ability to coexist with natives in a diverse community is usually the stumbling block for justification of introduced species under this regulation. Ephraim crested wheatgrass is being used in a mix at Horse Canyon and Wellington. This usage should demonstrate its compatibility with both natives and other introduced species. A trial usage at Sunnyside would also be acceptable and should be proposed at Kaiser's discretion.

4. The Division staff realize that in many cases native species will take longer to establish. This reality will be taken into consideration by mine inspectors who will coordinate evaluation of problem areas and requirements for reseeding with the team biologist.

To facilitate fall 1986 seeding at the Sunnyside Mine, Kathy Mutz and Susan Hasenjager agreed to the following mix in a phone conversation on 11/4/86:

| Species | % of seeds |
|---|---|
| Sodar streambank wheatgrass | 35 |
| Great Basin wildrye | 20 |
| Secar bluebunch wheatgrass | 30 |
| Yellow sweetclover | 5 |
| Small burnett | 5 |
| Alfalfa | 5 |

This seed mix should total about 15 PLS/ac drill seeding or 22 PLS/ac broadcast. The use of sweetclover, burnett and alfalfa are justified on their value in fixing nitrogen, performing as a nurse crop and not being overly competitive. Compatibility of burnett with natives in a mix was noted by Ms. Hasenjager. Any written information you can provide on burnett would be appreciated.

In order to avoid future confusion about interim revegetation, please provide by December 31, 1986 the appropriate replacement pages to update the Sunnyside MRP.

It has been a long and lively discussion. Hopefully this letter clarifies or at least gets the Division's position in writing. If you have any questions, please contact me or Kathy Mutz.

Sincerely,

Lowell P. Braxton
Administrator
Mineral Resource Development
and Reclamation Program

KMM:dh
cc: S. Hasenjager
L. Kunzler
S. Linner
K. Mutz
J. Whitehead
0531R/75-77