



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

Michael O. Leavitt
Governor

Ted Stewart
Executive Director

James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

TO: File

FROM: Paul Baker, Reclamation Biologist *PBB*

DATE: December 30, 1993

RE: Emery Deep Topsoil Piles *ACT 1015/015 #2*

In 1991, Consolidation Coal seeded a few areas at the Emery Deep Mine, including the topsoil piles near pond 6. A stipulation to the approval to conduct the seeding operation and to change the seed mix was that the topsoil piles be evaluated qualitatively for revegetation success for the next two years.

On December 21, 1993, I visited the Emery Deep Mine with Steve Johnson who was conducting a partial inspection. I inquired whether or not the qualitative evaluation had been done and was told that it had not. Because the revegetation success has been minimal, I said that I would provide them with an analysis based on my observations that day.

Success has been best on the middle, smaller pile. There are several seeded grasses that appear to have survived the second summer although they are still small and have not set seed. Because they have not set seed, it is impossible to identify them. This pile also contains a few small winterfat and fourwing saltbush plants. Even though this pile has more seeded species growing on it than the other piles, cover from the seeded species is still less than 5%.

The two larger piles have very few seeded grasses growing on them. A few winterfat and fourwing saltbush plants are present, but these are very small and it is questionable how much longer they will survive. There are more seeded plants in the gouges that were created with the seeding project than on other areas. Cover from seeded species is less than 1%.

There are more native species growing on the topsoil piles now than in 1991, but there is not as much cover from native species as there is in adjacent areas. Some of the possible reasons for not having better success are:

- 1) The soil is of poor quality, and its quality is diminished even further when it is disturbed. However, other topsoil piles at the mine have substantially more perennial vegetation than these three.
- 2) Precipitation is low in the area, and it may not have come at optimal times for plant establishment.



Page 2

ACT/015/015

December 30, 1993

3) There were some limitations with the equipment that could be used, and the gouges may not have been large enough to capture enough water to make the gouges as useful as they could have been.

4) Cattle and rabbits have access to the topsoil piles. I saw evidence of grazing of some of the established plants, including a woody plant that had been bitten off at ground level. During the first winter after the seeding, the cattle appeared to eat some of the mulch and to use it for bedding.