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UTAH POWER & LIGHT
MINING DIVISION
P.O. Box 310
Huntington, Utah 84528

April 28, 1986

Ms. Kathryn M. Mutz
Reclamation Biologist
State of Utah Natural Resources
Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Kathy:

Transmitted herewith please find the Wildlife Habitat Mitigation Plan for the Des-Bee-Dove/Wilberg Haul Road and Waste Rock Disposal Sites.

Thank you for your assistance. If you need further information please call me.

Sincerely,

Val Payne
Environmental Engineer

VP/jlj

Enclosure

cc: John Boylen
Mark Craig
Blake Webster
Bill Haynes
Chris Shingleton
Scott Child
File

DES BEE DOVE/WILBERG

WASTE ROCK SITE AND HAUL ROAD

WILDLIFE HABITAT MITIGATION PLAN

INTRODUCTION

Construction of the Des-Bee-Dove/Wilberg Waste Rock Sites and Haul Road will impact approximately fifty-five (55) acres of high priority mule deer winter range (see Appendix A and Map CM-10544-DS). The following mitigation plan is submitted in accordance with UMC 817.97, the Wilberg Mine MRP Appendix VII, and the Des-Bee-Dove Decision Document.

DESCRIPTION

The Waste Rock Sites and Haul Road are located in Sections 34 and 35, T17S, R7E and Section 2, T18S, R7E, SLB&M. Soil in the area is classified as Kenilworth series by SCS Soil Survey (1970). The area range site is Upland Stony Loam and the primary vegetation community is pinyon-juniper. Further description is found in MRP Appendix VII.

Recent vegetation production estimates indicate 450 pounds per acre including pinyon-juniper overstory and 150 to 200 pounds for shrubs and grasses. Estimated potential vegetation production is approximately 600 pounds per acre (see Appendix B).

PROPOSAL

The proposal is based on consultation with UDWR personnel. It is agreed that mitigation (habitat improvement) should be based upon productivity increase rather than acre for acre replacement.

Based on the estimated increased production potential, and the amount of habitat affected, approximately 18.3 acres of enchanced habitat

are required for mitigation of impacts. This proposal addresses enhancement of approximately 21.3 acres (see Appendix C).

The target species is mule deer (Odocoileus hemionus). The primary aim of the mitigation efforts will be forage production. Adequate cover is available in the area; therefore lack of forage appears to be a major limiting factor affecting carrying capacity. Abandoned roads and small cleared areas (0.10 to 2.77 acres) will be seeded with a mixture of grass, forb and shrub species to achieve improved forage production (see Drawings CM-10602-DS and CM-10674-WB, and Appendix D.)

The sites to be cleared were selected because of their proximity to abandoned roads, topographic characteristics (relatively level ridge tops) and sparseness of existing vegetation.

The sites are located in the general area northwest of the Des-Bee-Dove/Wilberg Haul Road and northeast of the Wilberg Haul Road. Adequate cover and water are available in this area; thus, wildlife/traffic conflicts will be lessened if habitat enhancement is completed in one area rather than on both sides of the haul roads.

PROCEDURES

Prior to site work, an archaeological assessment will be performed for the proposed locations. If resource conflicts are identified, alternate sites will be selected.

Trees will be removed from the selected sites through the use of a bulldozer. Clearing work will follow the natural contour of the sites (ridge tops). The trees will be pushed into windrows at the perimeter of each site. This will provide some protection from site disturbance by human activity or domestic livestock. Additional protection will be achieved by placement of large boulders at potential vehicle access points.

Soil samples will be analyzed to determine fertilizer application rates and the need for additional soil amendments. The soil will be

scarified to prepare the seedbed. The fertilizer and amendments will be incorporated into the soil during seedbed preparation.

Seeding will take place between October 1st and November 30th. The seed will be hand broadcast using a cyclone seeder. Seed mixture and application rates are presented in Appendix D.

Following seeding a layer of chopped alfalfa hay mulch will be applied at the rate of approximately two (2) tons per acre. The mulch will be crimped into the soil. Crimping will be done in such a manner that implement tracks will intercept potential runoff water thus improving the potential for vegetation establishment.

Inspection and evaluation of the mitigation measures will be made by Utah Power and Light, DWR and BLM personnel following the first and subsequence growing season.

APPENDIX A

IMPACTED AREA CALCULATIONS

HAUL ROAD

Road Length 6,600 Feet (MAP CM-10544-DS)

Average Width 260 Feet (BLM Right-of-Way)

6,600' X 260' - 43,560 ft^2/acre = 39.39 Acres

WASTE ROCK SITES

16 Acres (Wilberg MRP, Appendix VII, Page 4)

TOTAL IMPACTED AREA

39.39 Acres + 16 Acres = 55.39 Acres

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Moab District
San Rafael Resource Area
P. O. Drawer AB
Price, Utah 84501

6712
2810 (U-50148)
2890 (U-37642)
(U-067)

MAR 14 1985

Mr. Val Payne
Emery Mining Corp.
P. O. Box 310
Huntington, Utah 84528

Dear Mr. Payne:

The vegetative production estimates for the proposed mitigation effort for the Wilberg/Des-Bee-Dove haul road and rock storage area have been calculated by our range staff. The estimated current production is about 450 pounds per acre (400 - 600) counting the pinyon-juniper overstory and 150 - 200 pounds per acre without the pinyon-juniper (shrubs and grasses). Potential vegetation estimates would be around 600 pounds per acre due to limited annual precipitation (8.5 inches per year), southerly exposure, and poor, shallow soil conditions.

The poor soil conditions may be improved by the addition of fly ash from the Hunter power plant. The amount of fly ash to be added would best be decided upon by soil analysis on some of the test plots and/or planting seeds in various soil/fly ash mixtures in pots this spring to determine the proper fly ash concentration. Seed mixtures, rates of application (pounds per acre), time of planting, etc. have already been agreed upon by UP&L and BLM (refer to the enclosed right-of-way stipulations).

Low precipitation and slope aspect are difficult to overcome, with supplemental watering expensive and difficult to administer except at time of initial seeding. Areas to be treated (the small bulldozed pads) could be chosen so that northerly microsites would be picked, even though the overall aspect is southerly.

Some possible additional seed species for the coal haul road to improve soil quality would be the legumes (alfalfa, clovers, etc.) which add nitrogen to the soil and also provide high quality wildlife forage. We have obtained our best results from seeds gathered from sources within a 200 mile radius of where they are to be planted. Two new improved grass species might be added (see enclosed Forest Service Research News) for the crested wheatgrass variety could be used for the crested wheatgrass in the current seed mixture.

A shrub species we have no experience with, but which from the literature, might possibly be a good bet for this effort, based on the enclosed literature is prostrate or forage kocia (Kocia prostrata). Although we don't endorse any specific companies, you will find enclosed a 1985 seed catalog from Native Plants, Inc. This catalog has some good background material on many plant species which grow in Utah.

We look forward to reviewing your mitigation plan and thank you for your cooperative and conservation minded attitude towards Utah's wildlife and their habitat.

Three of my staff members you may have questions for are Jeff Carroll, wildlife biologist; Brent Spackman, range conservationist; or Merv Miles, surface protection specialist. If you have any further questions please don't hesitate to contact us either by phone (637-4584, 7:45 to 4:30 daily) or in person (900 No. 700 East, Price, Utah).

Sincerely yours,

Samuel R. Rowley
Area Manager

Enclosures(4)
1-U-50148, Stipulations
2-U-37642, Stipulations
3-F.S. Research News
4-Native Plants seed catalog

APPENDIX C

MITIGATION AREAS

SITE #		AREA (ACRES)
1		0.42
2		2.77
3		0.29
4		0.28
5		1.30
6		0.90
7		1.46
8		0.10
9	(Road)	0.85
10	(Road)	1.86
11		0.22
12		0.26
13		0.11
14		0.47
15		2.12
16		0.78
17		1.95
18		2.65
19		2.53
	TOTAL	21.32

MITIGATION REQUIREMENTS

CURRENT FORAGE PRODUCTION	200 lbs/acre
POTENTIAL PRODUCTION	600 lbs/acre
AREA IMPACTED	55.39 acres

MITIGATION AREA REQUIRED = 600 lbs/acre ÷ 200 lbs/acre = 3

Estimated production is three (3) times greater than current production.

Therefore, only 1/3 as much acreage is required to produce equal forage.

55.39 acres X 0.33 = 18.28 acres.

APPENDIX D

SEED MIXTURE

SPECIES	RATE (PLS LB./ACRE)
Western Wheatgrass	2
Indian Ricegrass	1
Paiute Orchardgrass	1
Ephraim Crested Wheatgrass	2
Needle and Thread Grass	1
Yellow Sweet Clover	1
Alfalfa	1
Scarlet Globemallow	1
Fourwing Saltbrush	2
Curlleaf Mountain Mahogany	2
Ephedra (Mormon Tea)	2
Prostrate Kocia	2
TOTAL	18