

BEAVER CREEK Coal Company

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**DIVISION OF
OIL, GAS & MINING**

July 16, 1987

Ms. Kathy Mutz
Utah Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Re: C.V. Spur Test Plots
C.V. Spur Processing Facility
ACT/007/022
Carbon County, Utah

Dear Kathy:

Enclosed is our proposal for the vegetation test plots at C.V. Spur. The proposed location of the plots is on the west end of the refuse pile, near the soil storage piles.

The proposal is submitted as Appendix 9-1, and upon approval, can be inserted into Chapter 9 of the M.R.P. Additional copies will be provided as requested.

It is our plan to install the test plots in the fall (September-October) of this year. The proposed area is no longer used for refuse disposal, and will not be disturbed in the foreseeable future. The corners of the plot area will be clearly marked and signed. A fence will be placed only if necessary.

I hope this proposal will meet with your approval. If you have any questions, or need any further information, please let me know.

Respectfully,

Dan W. Guy
Director Permitting/Compliance

DWG/rs

cc: R.J. Marshall
File

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APPENDIX 9-1
VEGETATION TEST PLOTS

7/16/87

VEGETATION TEST PLOTS

C.V. SPUR

Scope:

Beaver Creek C.V. Spur is located approximately 4 miles southeast of Price, Utah in Carbon County. The area comprises approximately 120 acres of potential disturbance associated with the washing, cleaning and loading of coal. The land lies in an agricultural region but is not classified a prime farm ground due to the rolling topography with saline soils derived from mancos shale. The predominant vegetative cover prior to disturbance is outlined in C.V. Spur MRP, Chapter 9, Total vegetative cover is less than 18% comprised predominantly of species which are of marginal importance is wildlife or domestic grazing. This, in combination with very low productivity, less than 300# per acre renders this area ideal to attempt to enhance the region in its ability to support a more diversified population of wildlife while providing increased forage and cover over what existed prior to disturbance.

Attempts to perform contemporaneous revegetation at the site in the past have met with little success. The purpose of the test plots is to evaluate different soil treatment and planting techniques, including a mixture of soil and refuse as a planting medium. In addition, a standard control test plot will be used to allow evaluation of individual plant species within the seed mix.

The test plots will be placed on the west end of the refuse pile,
and will remain undisturbed throughout the life of the study.

Methodology:

An area of 400' x 200' of level refuse will be covered by 6" of top soil [location Plate 1]. This test area will be divided into 8 100' x 100' plots. [See Figure 1]. Each plot will receive the following treatments:

Plot #1

[A] 6" of top soil mixed 50% with coal refuse. This mixing will be accomplished by spreading a uniform 6" of soil over the entire area then tilling to a depth of 12" to uniformly mix refuse and coal at approximately 50%.

[B] Drillseed the area with the appropriate seed [Attachment 1]

[C] Overspray the reseeded area with 2000# per acre wood fiber mulch in combination with 60# Terra Tac AR and 100# of 16-16-8 fertilizer.

Plot #2

[Same as Plot 1, A and B]

[C] Blow 2000# clean straw over the entire area and mechanically crimp into the prepared soil.

[D] Apply 100# 16-16-8 fertilizer per acre with straw.

Plots #3 & 4

Duplication of Plots 1 & 2 respectively with the exception that only 25% coal refuse is incorporated into the 6" of top soil.

Plots 5 & 6

Duplication of Plots 1 & 2 respectively with the exception no coal refuse is incorporated into the 6" of top soil.

Plot 7

Control Plot - 6" of top soil drill seeded with the appropriate mix.

Plot 8

A composite of all seed species on 6" of top soil over coal refuse planted in .1 meter wide rows.

Monitoring:

Success monitoring will be structured after the approved monitoring methodology as outlined in the CV Spur MRP, Chapter 9. The results of the monitoring data will be supplied to UDOGM on an annual basis, on or before March 31, 1988 and will continue for a period of 3 years with a summation and finding document on or before March 31, 1991.

CV SPUR Test Plot Layout

50% Coal R	25% Coal R	0% Coal R	0% Coal R
[1] 2000#/acre Wood Fiber Mulch 60#/acre Terra Tac AR	[3] Same Application	[5] Same Application	[7] Control Drill Seed & Fertilize
[2] 2000#/acre Straw Mulch	[4] Same Application	[6] Same Application	[8] 1 X 2 meter strip planting of individual species in seed mix Mulch and Tac

1" = 50 meters

Entire area has 6" top soil, 100#/acre 16-16-8 fertilizer, and is drill seeded (except #8 Plot which is hand broadcast and raked .

Mining and Reclamation Plan
 Castle Valley Surface Coal Processing and Loadout Facility Permit Application

Attachment I
 PERMANENT RECLAMATION SEED MIXTURE

Name	Rate (Pounds PLS/AC)	Price Per Pound	Total
<u>Grasses</u>			
Galleta (<u>Hilaria jamesii</u>)	2	\$26.25	\$ 52.50
Thickspike wheatgrass (<u>Agropyron dasystachyum</u>)	4	\$ 3.90	\$ 15.60
Indian ricegrass (<u>Oryzopsis hymenoides</u>)	3	\$ 8.15	\$ 24.45
Alkali scaton (<u>Sporobolus airoides</u>)	.75	\$ 3.30	\$ 2.48
Inland saltgrass (<u>Distichlis spicata</u>)	1	NA	NA
			<u>\$ 95.03</u>
<u>Forbs</u>			
Globemallow (<u>Sphaeralcea grossulariaefolia</u>)	.5	\$45.00	\$ 27.50
Sunflower (<u>Helianthus annuus</u>)	4	\$ 8.95	\$ 35.80
Palmer Penstemon (<u>Penstemon palmeri</u>)	.5	\$35.00	\$ 17.50
Yellow sweetclover (<u>Melilotus officinalis</u>)	2	\$.68	\$ 1.36
			<u>\$ 82.16</u>
<u>Shrubs</u>			
Winterfat (<u>Ceratoides lanata</u>)	3	\$18.50	\$ 55.50
Shadscale (<u>Atriplex confertifolia</u>)	4	\$ 8.00	\$ 32.00

Mining and Reclamation Plan
Castle Valley Sur Coal Processing and Loadout Facility Permit Application

Name	Rate (Pounds PLS/AC)	Price Per Pound	Total
<u>Shrubs (continued)</u>			
Matbush (<u>Atriplex corrugata</u>)	4	\$15.00	\$ 60.00
Whitestem rubber rabbitbrush (<u>Chrysothamnus nauseosus var. albicanlis</u>)	1.5	\$68.00	\$102.00
Four-wing saltbrush (<u>Atriplex canescens</u>)	<u>3</u>	\$ 6.00	<u>\$ 18.00</u>
			\$267.50
<hr/>			
TOTAL (for broadcast or hydroseeding)	<u>33.25</u>		\$444.69

($\frac{1}{4}$ rate for drill seeding.)