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Document Information Form

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MINE PLAN INFORMATION

cc:

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MINE PLAN INFORMATION

Castle Valley Spur Coal
 Mine Name Processing and Loadout Facility State ID: ACT/007/022

Operator BEAVER CREEK COAL CO. County Carbon

Controlled By J. Herickhoff, President

Contact Person(s) Dan Guy/Scott Raymond Position Permits Mgr./Env. Coordinator

Telephone: (801) 637-5050

New/Existing Existing Mining Method N/A

Fed. Lease No.(s) N/A

Legal Description(s) _____

State Lease No.(s) N/A

Legal Descriptions(s) _____

Other Leases (identify) See attached sheet.

Legal Descriptions _____

Ownership Data:

| <u>Surface Resources(acres)</u> | <u>Existing Permit Area</u> | <u>Proposed Permit Area</u> | <u>Total Life of Mine Area</u> |
|---------------------------------|-----------------------------|-----------------------------|--------------------------------|
| Federal | - | - | - |
| State | - | - | - |
| Private | 160 | 160 | 160 |
| Other | - | - | - |
| TOTAL | 160 | 160 | 160 |

Coal Ownership(Acres)

| | | | |
|---------|-----|-----|-----|
| Federal | - | - | - |
| State | - | - | - |
| Private | 120 | 120 | 120 |
| Other | - | - | - |
| TOTAL | 120 | 120 | 120 |

File in:
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 In 007/022, 1983 Internal
 For additional information

| <u>Coal Resource Data</u> | <u>Total Reserves</u> | <u>Total Recoverable Reserves</u> |
|---------------------------|-----------------------|-----------------------------------|
| Federal | _____ | _____ |
| State | _____ | _____ |
| Private | _____ | _____ |
| Other | _____ | _____ |
| TOTAL | <u>N/A</u> | <u>N/A</u> |

| <u>Recoverable Reserve Data</u> | <u>Name</u> | <u>Thickness</u> | <u>Depth</u> |
|---------------------------------|-------------|------------------|--------------|
| Seam | <u>N/A</u> | <u>N/A</u> | <u>N/A</u> |
| Seam | _____ | _____ | _____ |
| Seam | _____ | _____ | _____ |
| Seam | _____ | _____ | _____ |
| Seam | _____ | _____ | _____ |
| Seam | _____ | _____ | _____ |

Mine Life 30 years
Average Annual Production 1 million tons/year Percent Recovery 82% (washing recovery)
Date Projected Annual Rate Reached 1981
Date Production Begins 1978 Date Production Ends 2008
Reserves recoverable by: (1) Surface Mining N/A
(2) Underground Mining N/A
Reserves Lost Through Management Decision N/A
Coal Market Power Generation (Steam)

| <u>Modifications that have been approved:</u> | <u>Date:</u> |
|--|-----------------|
| <u>Raw Coal Handling Facility (Trail Mtn.)</u> | <u>8/18/80</u> |
| <u>Thickener Overflow Pond</u> | <u>9/24/81</u> |
| <u>Shop/Lab/Warehouse</u> | <u>9/8/81</u> |
| <u>Raw Coal Handling and Storage</u> | <u>3/15/83</u> |
| <u>Plant Overflow Pond</u> | <u>4/21/83</u> |
| <u>Sediment Control Modification</u> | <u>10/20/82</u> |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

CASTLE VALLEY SPUR LEASE AND OWNERSHIP DESCRIPTIONS

1. Special Warranty Deed dated November 11, 1977 from Utah Power & Light Company, grantor, to Swisher Coal Company (now Beaver Creek Coal Company), grantee, covering all the surface and a part of the minerals of the following described lands:

Township 15 South, Range 10 East, SLBM

Section 11: SW $\frac{1}{4}$, expecting therefrom the most Easterly
100 feet thereof.

2. Lease, granted for the purposes of railroad trackage and coal loading facilities, dated January 15, 1981, from the Denver and Rio Grande Western Railroad Company, lessor, to Beaver Creek Coal Company, lessee, covering the surface of the following described lands:

Township 15 South, Range 10 East, SLBM

A rectangular tract to lessor's land near Price, Utah, being the Westerly 42.5 feet of lessor's right-of-way from Engr. Sta. 91 plus 70 to Engr. Sta. 132 plus 70 of lessor's Castle Valley Spur.

3. Trackage agreement, dated January 22, 1974, between The Denver and Rio Grande Western Railroad and Utah Power & Light Company providing for construction and operation of trackage between Station 90 + 20 and Station 134 + 20 off the main track of Castle Valley Spur. With the consent of The Denver and Rio Grande Western Railroad Company, said agreement was assigned to Swisher Coal Company (now Beaver Creek Coal Company) on February 27, 1978.
4. Letter agreement, dated January 17, 1978, between R.D. & Peggy Campbell and Swisher Coal Co. (now Beaver Creek Coal Company) wherein Campbells grant a 20-foot right-of-way for water pipelines over and

across their land in Sections 2 and 11, Township 15 South, Range 10 East, between the Price River and Beaver Creek Coal Company's coal preparation and loadout facilities in the SW $\frac{1}{4}$ of Section 11, Township 15 South, Range 10 East.

5. Right-Of-Way Agreement, dated January 1, 1978, between David and Mildred Cave and Judson D. and Cherie Critchlow, grantors, and Swisher Coal Co. (now Beaver Creek Coal Company), grantee wherein Cave and Critchlow grant a 20-foot right-of-way for water pipelines over and across their property in Section 2, Township 15 South, Range 10 East, together with the right to build a pumphouse thereon.

DRAFT TECHNICAL ANALYSIS AND DECISION DOCUMENT

Beaver Creek Coal Company
C. V. Spur Preparation Plant
ACT/007/022, Carbon County, Utah

March 5, 1984

UMC 805.11 Determination of the Bond Amount

Existing Environment and Applicant's Proposal

The applicant has submitted information for the bond estimate.

Compliance

There is information for the bond estimate. However, more detailed information is needed.

Stipulation 805.11-(1-4)-PGL

1. (a)(2) Costs must be included for the mobilization and demobilization of equipment.
2. There are two permanent seed mixtures proposed. However, there are no acreages given for each. Please clarify.
3. Production rates to determine the number of shifts should be included.
4. Maintenance and monitoring includes hydrologic, erosional, as well as vegetative. The present \$1,500 per year is too low. Please adjust.

UMC 817.11 Signs and Markers

Existing Environment and Applicant's Proposal

The applicant's proposal for signs and markers is contained on pages 3-39 through 3-43. Representations of the entrance signs, perimeter boundary markers, soil stockpile signs, vegetation reference area signs and MSHA refuse disposal area signs are contained in the MRP.

Compliance

The applicant's proposal complies with this section.

Stipulations

None.

UMC 817.13-.15 Casing and Sealing of Exposed Underground Openings: General Requirements

Existing Environment and Applicant's Proposal

There are no oil or gas wells within the mine plan permit area. There are nine observation (monitoring) wells at various places on the C. V. Spur site. These wells are cased and will be sealed with cement.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.21-.25 Topsoil

Existing Environment and Applicant's Proposal

C. V. Spur is located approximately one mile from the Price River flood plain and four miles southeast of Price in Carbon County.

Rainfall ranges from 6 to 11 inches/year, mean annual soil temperatures range from 47° to 57° F and the number of frost free days range from 110 to 160. Native vegetation consists mainly of saltbush and grasses. The area has been used as rangeland and wildlife habitat.

Soil in the area formed in alluvium from marine shale and sandstone. They are generally shallow and may have salt and sodium problems.

Five soil series were found to exist within the permit area: Billings; Chipeta; Killpack; Killpack High Water Variant--all torrifuvents; and saltair, a salorthid. The saltair series are generally highly saline and may form salt crust on the surface.

"A" horizons range from as shallow as three inches in portions of the Chipeta to as thick as 10 inches in the Killpack. Soil textures include silt loam, silty clay loam and silty clay. Infiltration is generally slow and water erosion potential moderately high.

The C. V. Spur Preparation Plant is a combination of pre-Law and post-Law disturbance. Approximately 77 acres of land had been disturbed before enactment of Public Law 95-87 and the remainder has been or will be disturbed post-Law. On the 77 acre pre-Law disturbance, no topsoil was stockpiled for reclamation. On post-Law disturbance that has already occurred, approximately 13,700 yd³ of soil has been stockpiled. An additional disturbance of 11

acres is proposed with topsoil removal depth of six inches on the Chipeta and six inches on the Killpack, generating approximately 9,000 yd³ of topsoil. The topsoil will be stripped, stockpiled in the designated areas (Plate 3-2) and seeded in accordance with the interim revegetation plan.

A variance for nonremoval of topsoil from the saltair series has been requested and granted, the justification being the high salt content of this particular soil series.

At the time of final reclamation, the regraded areas of post-Law disturbance will be covered with six inches of the stockpiled topsoil and seeded in accordance with the final revegetation plan.

Areas that were disturbed pre-Law, except on the refuse disposal site, will not have topsoil replaced. These areas will utilize the soils that are in place at the time of reclamation. Chemical and physical analysis of the pre-Law disturbances have been conducted. The results (Table 8-5, page 8-29) indicate that the in situ soil is of equal quality to that of the stockpiled topsoil. These pre-Law areas will be disced, cloddy surfaces will be pulverized and the area seeded in accordance with the final revegetation plan.

The pre-Law refuse disposal area will be covered with six inches of the stockpiled topsoil and seeded in accordance with the final revegetation plan. The shallow depth of cover material should be adequate because: (1) the refuse material is nontoxic in nature; (2) the native soil is shallow and of poor quality; and (3) analyses of the refuse material indicate that, other than texture, it is rated fair as a plant growth medium.

Compliance

The applicant will be in compliance when the following stipulations have been met.

Stipulation 817.21-.25-(1-5)-EH

1. The acreage figures of pre-Law and post-Law disturbance must be given.
2. Total acreage figures of disturbed and proposed disturbance must be given.
3. The applicant must commit in writing to removal of 10 inches of any future disturbance of the Killpack series.
4. Table 8-6 must be corrected to reflect the 10 inch removal depth on the Killpack series.
5. The applicant must submit figures supporting the claim that there is enough stockpiled soil material to cover the post-Law disturbance and the refuse disposal site with a minimum of six inches of soil.

UMC 817.41 Hydrologic Balance: General Requirements

Existing Environment and Applicant's Proposal

The C. V. Spur Preparation Plant is located in Castle Valley, a broad featureless plain lying between the Wasatch Plateau on the west and the San Rafael Swell to the east. The permit area lies on top of the Bluegate Shale member of the Mancos Formation. The Ferron Sandstone lies roughly 500 feet below and is the only regional aquifer in the area.

The Bluegate Shale is a blue-gray marine mudstone acting as an aquitard. The upper 10 to 20 feet of the Bluegate contains weathered clays with some lenses of gravel and residual clay loam soils typical of weathered Mancos Shale.

Well log data from oil and gas drilling in the area indicate that water in the Ferron Sandstone, at least in this vicinity, yields brackish or salt water. Ground water quality in general in the Mancos Shale area is characterized by high levels of Total Dissolved Solids (TDS).

Surface water in and around the C. V. Spur site is ephemeral at best with annual precipitation averaging 9.25 inches. The permit area lies over one mile from the nearest perennial or intermittent stream (the Price River).

The applicant's proposal to minimize impacts to the ground water system includes a french drain along the eastern and northern boundary of the permit area to intercept and route shallow ground water around the site. Additionally, the applicant has installed a system of ground water monitoring wells on and adjacent to the permit area to detect any impacts to the ground water system.

The applicant's proposal to minimize impacts to the surface water system include routing disturbed area runoff to sedimentation ponds via a series of structures which include ditches and culverts. The applicant's plant water system cleans and recirculates plant water overflow with no discharge of plant water occurring. Undisturbed drainage is routed around the disturbed area via diversion ditches.

Compliance

Given the applicant's proposal and background data on the ground water system at the C. V. Spur site, no impact is anticipated to the ground water system. This is also supported by the fact that there are no underground operations at the C. V. Spur site. The applicant complies with this section in regards to ground water.

The applicant's surface water proposal meets the general requirements of this section. Specific deficiencies are addressed in the compliance sections for regulations UMC 817.42-.57.

Stipulations

None.

UMC 817.42 Hydrologic Balance: Water Quality Standards and Effluent Limitations

Existing Environment and Applicant's Proposal

The applicant proposes to meet water quality effluent standards by routing surface drainage from the disturbed area into sedimentation ponds. On pages 7-78 and 7-80 of the MRP, the applicant notes that the water from these sedimentation pond systems is normally not discharged, but fed back into the plant water intake system.

The applicant has obtained National Pollutant Discharge Elimination Permit #UT-00239490 with the approved outfall from pond #6.

On page 3-54 of the MRP, the applicant notes that all sedimentation ponds and diversion ditches will remain in place until an effective vegetation cover is established.

Compliance

With the exception of pond #6 where some sizing questions remain, the applicant's sedimentation pond system will contain the 10-year, 24-hour storm event assuming the pond system is empty from previous runoff or plant water. The information in the MRP does not definitively demonstrate that effluent limits will be met. Further, the applicant's surface water monitoring plan for the pond #6 discharge (the only discharge point for sediment ponds to off-site) does not definitely commit to sampling when a discharge takes place (see page 7-90a). The applicant needs to make a definite commitment to sample discharges from pond #6 and Station CV-14W (ditch northwest of the site) to verify that effluent requirements are being met. This is especially important in view of the likelihood of a discharge with the history of the pond system being full from plant water overflow.

Stipulations

See Stipulations under UMC 817.52.

UMC 817.43 Hydrologic Balance: Diversions and Conveyance of Overland Flow, Shallow Ground Water Flow and Ephemeral Streams

Existing Environment and Applicant's Proposal

The TR-20 storm hydrology analysis performed to assess sediment pond outlet adequacies was also structured to permit assessment of collection ditches and culvert capacities. Storm hydrographs from each sub-drainage are

routed through the culverts and ditches shown on Plate 3-2. Design dimensions and design discharges and velocities for the collection ditches are provided on Plate 7-5. Design dimensions for the culverts designated on Plate 3-2 are provided in Table 7-25. All design analyses were performed for a 25-year, 24-hour rainfall event using the Farmer-Fletcher rainfall distribution.

Compliance

The applicant has adequately designed all ditches and culverts within the C. V. Spur permit area to handle either the 10-year, 24-hour storm event or the 25-year, 24-hour storm event, where applicable.

The applicant has failed to locate culvert C-14 on Plate 3-2 so that the regulatory authority can assess its adequacy to pass the necessary design discharge. The applicant has also not provided the location and sizing requirements of necessary sediment control measures (i.e., riprap) in areas where the exit velocities from culverts or ditches may exceed 5 fps, yet has listed erosive velocities of 5.5 fps for culvert C-5, as an example.

Stipulation 817.43-(1-2)-TM

1. The applicant must show the location of culvert C-14 on Plate 3-2.
2. The applicant must show the location of necessary sediment control measures associated with erosive exit velocities from culverts and ditches. The only problem area determined in the review is the exit velocity from culvert C-5. The applicant must demonstrate that this culvert exit area has adequate protection.

UMC 817.44 Hydrologic Balance: Stream Channel Diversions

Existing Environment and Applicant's Proposal

The applicant has not diverted flow from perennial and intermittent streams, and ephemeral streams with drainage areas greater than one square mile, within the permit area.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.45 Sediment Control Measures

Existing Environment and Applicant's Proposal

The applicant's proposal for sediment control incorporates routing all disturbed area drainage via ditches and culverts to a system of sedimentation ponds. Runoff from the sedimentation pond system is used for plant water make-up rather than discharging effluent off-site.

Compliance

Based on the nearly flat topography and very mild slopes at the C. V. Spur site, as well as the nonerosive velocities in disturbed and undisturbed diversion ditches, the applicant will comply with this section when Stipulation 817.43-(2)-TM is addressed.

Stipulations

None.

UMC 817.46 Sedimentation Ponds

Existing Environment and Applicant's Proposal

The applicant has five sedimentation ponds at the C. V. Spur site for control of disturbed area drainage. Ponds 1, 2 and 3 are in a series, and for purposes of discussion, are referred to hereafter as pond #1. Ponds #1 and #5 route discharges to pond #6 which is the lowermost sediment control structure on-site.

Pond #6 is used as a sedimentation pond as well as being a part of the plant water make-up system. Two gravel dikes in pond #6 provide filtration and cleaning for water passing through pond #6. Storm water retained in pond #6 is drawn off into the coal cleaning plant, minimizing the need for off-site discharge from pond #6.

All ponds at the C. V. Spur site are incised with a compacted berm approximately three feet high around the pond. The berm is added only for overflow protection and is not considered in sizing calculations.

Page 3-54 of the MRP notes that the sedimentation ponds will remain in place until an effective vegetative cover has been reestablished during reclamation.

Plate 7-4a denotes the sediment cleanout levels with the markers to be used for all the ponds.

For the design specifications and details on the sedimentation ponds, refer to pages 3-31, 3-32, 7-80 and Plates 7-4 and 7-4b of the MRP.

Compliance

Runoff volumes were verified using the Soil Conservation Service (SCS) curve number equation employing acreages calculated by the regulatory authority. The volumes calculated by the regulatory authority were from 8-15 percent higher than those calculated by Beaver Creek Coal Company (BCCC). This was due to differences in acreages calculated by the regulatory authority and BCCC.

Sediment volumes calculated by the applicant in the Universal Soil Loss Equation (USLE) were verified by the regulatory authority.

Total pond volume requirements incorporating sediment volume and runoff volume from the 10-year, 24-hour event indicate that ponds #1 and #5 are adequately sized.

Pond #6 appears to be potentially undersized based on calculated sediment volume and the 10-year, 24-hour runoff volume. The information provided and configuration of pond #6 make it difficult to calculate the volume of the pond. Plate 7-4 depicts pond #6, but not to scale. Further, the side slopes for pond sides and gravel filter bank sides are not indicated. The applicant must provide accurately scaled drawings and cross sections of pond #6 including the gravel dike filters. Additionally, the applicant should demonstrate the volume of water which could be stored in the porous gravel dikes or subtract entirely the full volume of the gravel dikes from the total pond volume available.

The applicant's peak flows for the 25-year, 24-hour storm were verified using the University of Kentucky "Sedimot II" computer model and the Farmer-Fletcher rainfall distribution. This information was utilized to verify the adequacy of spillways. Based on the peak flows generated by the regulatory authority, it appears that the spillway configuration for all the sediment ponds are adequate to pass the 25-year, 24-hour rainfall event.

Page 3-31 of the MRP notes that the spillway outlet for pond #6 is a 24 X 36 CMP culvert. This configuration conflicts with the design shown on Plates 7-4 and 7-4b as well as what exists on-site presently. Page 3-31 must be updated.

UMC 817.46(g) requires that there be no outflow through the emergency spillway during a 10-year, 24-hour precipitation event regardless of the volume of sediment and water present in the pond. Based on site inspections by the regulatory authority (the most recent being February 15, 1984), the sediment pond system at C. V. Spur has remained full or nearly full for a period of a year or more. Some of this situation is attributable to the plant water problem which existed and was to have been addressed by the installation of the plant water overflow pond. The plant overflow pond has been in place for seven to eight months as of the date of this writing, but the pond system is still full. It appears that the applicant's proposal (page 3-32) to pump down water levels of ponds cannot meet the requirements of this section. A revised plan to decant ponds #1 and #5 when detention time has been sufficient to meet effluent standards is needed. Approval by the regulatory authority of a modification to the drainage plan at C. V. Spur (see April 21, 1983 letter from Joe Lyons DOGM to BCCC) addressed this concern with stipulations prohibiting plant overflow and thickener overflow during storm runoff and when pond #6 is full. The requirements of Stipulations 3-28-83-1 and 3 should be incorporated into the plan in the form of commitments.

Section UMC 817.46(t) requires that all ponds be examined for structural weakness, erosion, and other problems. Even though the ponds at C. V. Spur are incised, an inspection program for erosion of spillways, ponds inlets, sediment and water levels and any other applicable items must be proposed.

Stipulation 817.46-(1-4)-JW

The applicant shall:

1. Provide accurately scaled drawings and cross-sections including side slopes for pond sides and side slopes for the two gravel dikes for inclusion in the MRP. The porosity of the gravel dikes must also be provided.
2. Provide revised page 3-31 of the MRP to reflect the current configuration of the outlet structure for pond #6.
3. Provide a revised plan to assure that the 10-year, 24-hour runoff volume in sediment ponds is not impeded by plant or thickener overflows.
4. Provide a plan for inspection of ponds in conjunction with UMC 817.46(t).

UMC 817.47 Hydrologic Balance: Discharge Structures

Existing Environment and Applicant's Proposal

The applicant has used the TR-20 computer model to analyze the effectiveness of sediment pond outlet structures. In the rare event that a discharge overtops a structure, little damage or erosion should occur because the ponds are incised.

Compliance

The applicant has failed to provide information on what measures have been taken to reduce erosion from exit velocities associated with discharge structures.

Stipulations 817.47-(1)-TM

1. What measures have been taken to prevent erosion of discharge structures? The applicant must provide this information for ditches and culverts where necessary. This information should include riprap size according to expected velocities and placement location.

UMC 817.48 Hydrologic Balance: Acid-forming and Toxic-forming Materials

Existing Environment and Applicant's Proposal

The applicant has sampled the coal and plant reject matter. Analyses of these samples are presented on pages 3-4 to 3-15. Based on these analyses, no acid-forming or toxic-forming materials were found to exist at the present time.

To insure that no acid-forming or toxic-forming materials enter ground or surface water after the waste material has weathered, the applicant has proposed to inspect, on a quarterly basis, the waste banks and monitor water to insure no acid-forming or toxic-forming materials are present.

If the inspections disclose a potential hazard, the regulatory authority will be notified immediately.

Compliance

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.49 Hydrologic Balance: Permanent and Temporary Impoundments

Existing Environment and Applicant's Proposal

The applicant does not propose any permanent impoundments on the permit area. Temporary impoundments which are not part of the sedimentation pond system include the thickener pond, thickener overflow pond and the plant overflow pond (the applicant's proposal for the sediment ponds is covered in UMC 817.46).

Both the thickener overflow and plant overflow ponds are incised impoundments and do not have embankments associated with them. The thickener pond is constructed with concrete sides and bottom.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.50 Hydrologic Balance: Underground Mine Entry and Access Discharges

Existing Environment and Applicant's Proposal

There are no underground entries associated with the C. V. Spur operation.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.52 Hydrologic Balance: Surface and Ground Water Monitoring

Existing Environment and Applicant's Proposal

The applicant has installed a network of ground water observation wells on and adjacent to the C. V. Spur facility. Monthly water levels and quarterly water quality sampling has been undertaken to establish baseline data. The plan proposes to monitor the ground water sampling points biannually in the spring and fall, obtaining water levels and chemical analysis (parameters listed in Plate 7-15) for each monitoring point. Field measurements of pH, conductivity and temperature will be taken during sampling.

Surface water monitoring proposed includes monthly monitoring of discharge points from pond #6 according to the NPDES discharge permit and quarterly monitoring of the north drainage ditch northeast of the permit area.

Compliance

The applicant's surface water monitoring plan for the #6 pond effluent does not definitely commit to sampling when a discharge takes place. The applicant needs to make a definite commitment to sample discharges from pond #6 when they occur to assure effluent limits are being met.

Stipulation 817.52-(1)-JW

1. The applicant must make a written commitment to monitor discharge from pond #6 when they occur.

UMC 817.53 Hydrologic Balance: Transfer of Wells

Existing Environment and Applicant's Proposal

The applicant indicates on page 3-54 of the MRP that there are no plans to transfer any wells to other parties.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.54 Hydrologic Balance: Water Rights Replacement

Existing Environment and Applicant's Proposal

The applicant has committed to replacing any existing water right which is diminished as a result of the C. V. Spur operations with water from 357 shares of reservoir water (page 7-89a).

Compliance

It appears unlikely that the operations at this facility will have an adverse effect on water rights in the area. The applicant complies with this section.

Stipulations

None.

UMC 817.55 Hydrologic Balance: Discharge of Water into an Underground Mine

Existing Environment and Applicant's Proposal

There are no underground entries associated with the C. V. Spur operation.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.56 Hydrologic Balance: Postmining Rehabilitation of Sedimentation Ponds, Diversions, Impoundments and Treatment Facilities

Existing Environment and Applicant's Proposal

The applicant does not propose any permanent structures for the C. V. Spur operation.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.57 Hydrologic Balance: Stream Buffer Zones

Existing Environment and Applicant's Proposal

No perennial or intermittent stream crosses or comes within approximately one mile of the permit area.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.61-.68 Use of Explosives: General Requirements

This is a loadout facility, therefore, this section is not applicable.

UMC 817.71-.74 Disposal of Underground Development Waste and Excess Spoil and Nonacid and Nontoxic-forming Coal Processing: General Requirements

This section is not applicable.

UMC 817.81-.85 Coal Processing Waste Banks

Existing Environment and Applicant's Proposal

Coal processing waste at C. V. Spur is truck hauled from the preparation plant to the designated disposal site within the permit area. The design, construction and maintenance of the waste bank is under the supervision of a registered professional engineer.

The coal processing waste is the reject from the washing cycle used to clean and upgrade the coal from BCCC mines in the Carbon-Emery county area. All of the seams producing coal for this plant are low sulphur (0.5 percent to 0.8 percent). The reject is also low sulphur, nonacid and nontoxic. The texture of the refuse material is coarse.

The refuse banks will be inspected under the supervision of a qualified registered engineer at least quarterly until the bank has been graded, covered and reseeded. Inspections will include observations of any potential safety hazards to assure that organic material and topsoil is removed before deposition and that construction and maintenance are being performed in accordance with the design plan.

If such inspection discloses a potential hazard, the inspector will immediately notify the regulatory authority of the hazard and the emergency procedures will be implemented. Copies of the inspection findings will be maintained for review at the site.

Protection of water resources is accomplished through the use of sedimentation and filtering ponds and a system designed for no discharge from the permit area within a 10-year, 24-hour precipitation event. A subdrainage system is employed upslope from the refuse disposal area. The surface drainage from the refuse pile is collected into a collection pond downslope. The overflow from this pond is conveyed through an additional collection ditch to a final filtering pond and discharged into the same underground sump to be recirculated through the plant as wash water. Slope protection is provided at the face of the refuse bank through the use of terracing. Upon completion, the bank will be graded, covered with suitable plant growth material and revegetated.

The refuse piles are knocked down and spread at least every other day. Compaction should take place during spreading. The refuse is compacted in layers not to exceed 24-inches, starting at the perimeter and working out. Compaction will be to 90 percent of maximum dry density. The pile will be graded and maintained to allow drainage and prevent water impoundment. No burned coal waste, other minerals, or refuse is to be removed from the disposal area.

A static safety factor of 1.98 was derived using worse case conditions.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.86-.87 Coal Processing Waste: Burning and Burned Waste Utilization

Existing Environment and Applicant's Proposal

The coal processing waste is the reject from the washing cycle used to clean and upgrade the coal from the BCCC mines in the area.

Compliance

The coal processing waste is inspected at least quarterly for any potential hazards. It is not mentioned, however, what would be done should a fire start.

Stipulation 817.86-.87-(1)-PGL

1. A commitment is needed by the applicant that in the event any coal processing waste fire did happen to occur, it would be handled in accordance with a plan approved by MSHA and the regulatory authority. Before any burned coal processing waste or other materials or refuse is removed from a disposal area, approval must be obtained by the regulatory authority and that plan shall be certified by a qualified engineer.

UMC 817.89 Disposal of Noncoal Wastes

Existing Environment and Applicant's Proposal

Temporary storage of noncoal waste is in a metal trash receptacle in a designated portion of the permit area. Garbage is loaded into a truck and disposed of at an approved sanitary landfill.

Oil and grease waste are collected within a buried tank located south of the plant. As needed, the tank will be pumped into a commercial disposal truck and disposed off-site in an approved manner.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.91-.93 Coal Processing Waste: Dams and Embankments

Existing Environment and Applicant's Proposal

There are no dams or embankments constructed of coal processing waste at the C. V. Spur site.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.95 Air Resources Protection

Existing Environment and Applicant's Proposal

The applicant's proposal for air resource protection is contained on pages 11-4 and 11-11 through 11-17 of the MRP. Tables 11-6 and 11-7 detail the specific air pollution control measures, including enclosed hoppers, crushers, covered conveyors and storage, concrete stacking tubes, silos and water sprays.

Compliance

Based on conversations with the Air Quality section of the Utah Department of Health (DOH) and an approval letter dated August 21, 1980 from the DOH, the applicant is in compliance with the air quality provisions of the regulations.

Stipulations

None.

UMC 817.97 Protection of Fish, Wildlife and Related Environmental Values

Existing Environment and Applicant's Proposal

The C. V. Spur project area is classified as a saltbush vegetation community and is dominated by low growing shrubs and a large amount of bareground. This community provides cover and food for relatively few wildlife species when compared to more diverse vegetation types found in Utah, and is of limited value as wildlife habitat.

Economically important and high interest species which utilize habitats within and adjacent to the permit area include the ring-necked pheasant, mourning dove, desert cottontail, badger, coyote and white-tailed prairie dog. Observations by company environmental personnel have not indicated occurrences of raptors or migratory birds of high federal interest on the site. However, due to the proximity of the project site to surrounding cropland and the Price River (approximately one mile from the floodplain), the area could provide minimal food and cover for these species.

Three federally listed threatened or endangered species of wildlife, bald eagle, peregrine falcon and black-footed ferret, may inhabit areas around C. V. Spur. Habitat surrounding the permit area is ranked as of substantial value to the bald eagle and peregrine falcon. However, it is highly unlikely that these raptors utilize the site due to continuous operations of the Spur.

The area is also classified as historic range for the black-footed ferret. However, field studies conducted by the operator in the white-tailed prairie dog community showed no evidence of use by ferrets.

Mitigation and management plans for terrestrial species focus on minimizing impacts related to continued mining activity and facilitating rapid return of the site to suitable habitat following mining.

Other mitigation measures include conducting "employee awareness" programs to inform company personnel of sensitive periods for wildlife, contemporaneous reclamation of disturbed areas to wildlife habitat, and prevention of hunting and harassment of wildlife in the permit area.

Following mining, the applicant will implement revegetation methods designed to restore and enhance wildlife habitat on disturbed areas. The revegetation plant mix includes herbaceous and woody species that are adapted to on-site conditions and are of known value to wildlife for cover, forage or both. A complete revegetation plan including species lists and site specific revegetation procedures is given in Section 3.5.5.

Compliance

The U. S. Fish & Wildlife Service (USFWS) has determined that the armless configuration and close proximity of the powerline to the C. V. Spur accounts for limited use by raptors. No modifications are required at this time.

The applicant has submitted mitigation and management techniques which address the requirements of UMC 817.97. However, the applicant has failed to commit to not using persistent pesticides on the area during operations and reclamation activities and to promptly reporting the presence in the permit area of any threatened or endangered species or any bald or golden eagle which has not been previously reported to the regulatory authority.

Stipulation 817.97-(1-3)-SC

1. The applicant shall commit to not using persistent pesticides on the area during operations and reclamation activities unless approved by the regulatory authority.
2. The applicant shall commit to promptly reporting the presence in the permit area of any threatened or endangered species or any bald or golden eagle not previously reported to the regulatory authority.
3. The applicant shall submit Plate 10-1 showing active and inactive white-tailed prairie dog burrows.

UMC 817.99 Slides and Other Damage

Existing Environment and Applicant's Proposal

Refuse piles are inspected regularly under MSHA requirements and construction procedures assure the long-term stability of the piles. No adverse impacts to human safety or environmental quality are foreseen.

Compliance

The applicant has constructed the piles in accordance with the plan. The applicant will comply with this section when a commitment is made to notify the regulatory authority if a slide ever did occur.

Stipulation 817.99-(1)-PGL

1. The applicant shall make the commitment that any time a slide occurs which may have a potential adverse effect on public, property, health, safety or the environment, the person who conducts the mining related activity shall notify the Division by the fastest available means and comply with any remedial measures required by the Division.

UMC 817.100 Contemporaneous Reclamation

Existing Environment and Applicant's Proposal

The applicant has committed to contemporaneous reclamation of refuse disposal areas as the piles become completed. The areas will be covered with an appropriate amount of plant growth material, seeded, fertilized, mulched and revegetated to acceptable reclamation standards.

Compliance

The applicant complies with this section.

Stipulations

None.

UMC 817.101 Backfilling and Grading

Existing Environment and Applicant's Proposal

At the termination of operations, the surface area, except the refuse pile, will be graded to a final land form as indicated on Plate 3-7. The backfilling and grading effort will be minimal because no overburden was removed and the area is located on a relatively level site. Only the areas excavated in construction of the sedimentation ponds will require any backfilling. Material necessary for the backfilling of the sedimentation ponds is presently being used for berms and dams.

Compliance

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.103 Covering of Coal and Acid- and Toxic-forming Material

Existing Environment and Applicant's Proposal

The C. V. Spur facility is used for the washing of coal from the Huntington #4 and Gordon Creek mines. The coal from the BCCC operation is low sulphur (0.5 percent to 0.8 percent) and the analysis of the reject material also indicates a low sulphur content. Analysis of the coal and reject material have been presented on pages 3-4 to 3-13. These results indicate that no acid- or toxic-forming material are present. Therefore, the applicant has proposed to cover the material with a minimum of six inches of soil material as per the soil redistribution plan (UMC 817.21-.25).

Compliance

The applicant will be in compliance when the following stipulation is met.

Stipulation 817.103-(1)-EH

1. The applicant must supply a volume estimate of the soil material required to cover the refuse disposal site.

UMC 817.106 Regrading or Stabilizing of Rills and Gullies

Existing Environment and Applicant's Proposal

Any areas that develop rills and/or gullies deeper than nine inches after final grading and seeding will be regraded or otherwise stabilized and reseeded in accordance with UMC 817.111-.117.

Compliance

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.111-.117 Revegetation

Existing Environment and Applicant's Proposal

The C. V. Spur permit area contains two major plant communities. The Abandoned Agricultural and Grazing Land Community which comprises 12.9 percent (19.8 acres) and the Salt Desert Shrub Community comprising 14 percent (21.6 acres) of the permit area.

A total of 112.6 acres (73.1 percent of the permit area) has been disturbed for use as industrial, refuse and processing areas. Another 4.45 acres for an Emergency Coal Stockpile Modification may also be disturbed. It is assumed that all disturbed area is former Salt Desert Shrub type and will be reclaimed to that community type.

One reference area, representative of the salt desert shrub type, has been selected. It is located within the permit area in an undisturbed area. The reference area is fenced and will not be disturbed throughout the life of the mine. The reference area was sampled for total vegetative cover, cover by species, productivity by life form and by species and shrub density and height. Sample adequacy was achieved for all parameters with the exception of cover data. The reference area has been determined to be in good range condition by the SCS (letter from SCS to BCCC dated September 29, 1983).

No plants cited by the USFWS as threatened or endangered were found at C. V. Spur during surveys, nor have any been identified as being present in the general area (letter from USFWS to OSM dated October 21, 1983).

The applicant has presented a revegetation plan which describes procedures and planting mixtures for reclamation of temporarily disturbed areas. Seeding of grasses and forbs as well as planting of shrub seedlings will occur during the first desirable planting season after final grading, either during the spring (March 15-May 1) or fall (October 15-first snowfall).

The planting mixtures for final revegetation consists primarily of native grasses, forbs and shrubs. Yellow sweetclover (Melilotus officinalis) is the only introduced species included. This species, in the rate provided, is valuable to control erosion and as wildlife forage. The suitability of this species will be assessed as part of the temporary reclamation on the permit area. The seed mixtures will be spread either by hand or machine depending on site conditions.

The type of mulch to be applied will be dependent on final site conditions. Native hay mulch will be applied at a rate of 4,000 lbs/ac on 3:1 slopes or less. The mulch will be crimped in to prevent loss of mulch and to promote entrapment of moisture. On slopes between 2:1 and 3:1, wood fiber mulch or other commercial mulches will be applied at a rate of 2,000 lbs/ac and at a rate of 2,500 lbs/ac for slopes steeper than 2:1. Tackifiers will be used at a rate of 120-160 lbs/ac on slopes to keep mulch in place.

Final reclaimed areas will be monitored at least every three years following plant establishment until bond release. Both the final reclaimed area and reference area will be sampled for cover and woody plant density during each monitoring period. Sampling methodology and sample adequacy will meet all applicable regulatory guidelines.

Grazing of revegetated areas by domestic livestock and wildlife will be restricted by fencing until vegetation is mature enough to maintain regrowth and control erosion.

Feasibility of Reclamation

The C. V. Spur permit area receives approximately 7 to 10 inches of precipitation annually. This amount is sufficient for the establishment of many of the species native to the area. The applicant has committed to using areas temporarily planted with native and introduced species to evaluate the suitability of species for reclamation. The feasibility of establishing a majority of the shrub cover and density through seeding is questionable due to the harshness of the site. Seeding of shrubs is deemed acceptable, though BCCC is responsible for meeting postmining cover, density and diversity requirements. If revegetation efforts fail, the applicant will be required to establish shrubs by planting which will probably extend the bond period responsibility.

Compliance

The applicant has adequately addressed revegetation for the most part. However, in addition to sampling cover and woody plant density during monitoring and bond release as proposed, the applicant must also sample and compare production between the reference and revegetated areas.

Stipulation 817.111-.117-(1)-SC

1. The applicant shall commit to measuring and comparing productivity of the reference area and revegetation area for bond release.

UMC 817.131 Cessation of Operations: Temporary

Existing Environment and Applicant's Proposal

The applicant has not addressed this section.

Compliance

The applicant will be in compliance when the following stipulation is met.

Stipulation 817.131-(1)-EH

1. The applicant must commit in writing to notify the regulatory authority of temporary cessation in accordance with this section.

UMC 817.132 Cessation of Operations: Permanent

Existing Environment and Applicant's Proposal

The applicant presents final abandonment and reclamation plans in Section 3.5, pages 3-52 through 3-69 of the MRP.

Compliance

The applicant will be in compliance with this section upon final approval of the mining and reclamation plan.

Stipulations

None.

UMC 817.133 Postmining Land-Use

Existing Environment and Applicant's Proposal

Prior to the existing land-use as a coal preparation and loadout facility, the land was capable of providing limited wildlife habitat and supporting very limited grazing (MRP Section 4.4.1) and was zoned for agricultural use. Following the cessation of the current operation, the applicant will reclaim the area employing seed mixtures which contain species that are adapted to on-site conditions and are of known value to wildlife which would be expected to inhabit the area (MRP Section 3.4.5). In Section 3.4.1 of the MRP (p. 3-44), the applicant states that reclamation efforts will be directed to recreating the pre-disturbance land-use.

Compliance

BCCC is the surface owner of this area and the regulatory authority has determined that the proposal to return the land to wildlife habitat and limited grazing land is feasible as discussed under UMC 817.111-.117 of this document and will be compatible with adjacent land-use as well as premining land-use. Therefore, the applicant is in compliance with this section.

Stipulations

None.

UMC 817.150-.156 Roads: Class I: General

Existing Environment and Applicant's Proposal

The main access road serves as the coal haulage road. The road is approximately 2,600 feet long from the intersection with the County Road to the plant parking lot. The road is maintained at a width of 24 feet and is gravel-surfaced. This road will be used and maintained throughout the life of the operation.

The refuse disposal road is approximately 1,584 feet long. The road is gravel-surfaced and maintained at approximately a 20 foot width. The road runs from the preparation plant to the refuse disposal area and will be maintained throughout the active phase of refuse disposal.

Compliance

The applicant will comply with this section when the restoration of the road area is described.

Stipulation 817.150-.156-(1)-PGL

1. The applicant shall describe the reclamation of the roads for this processing facility.

UMC 817.180 Other Transportation Facilities

Existing Environment and Applicant's Proposal

The major railroad grade embankment is located on the eastern edge of the site, immediately outside the permit area. This grade supports the main rail lines and is owned by the Denver and Rio Grande Western Railroad. This line will remain in service after the closure of the C. V. Spur.

The railroad loop within the C. V. Spur is owned by BCCC. It consists of a single set of tracks slightly elevated (three feet) above natural ground. This rail serves as a loop for the unit trains to travel head-first into the silo, eliminating the need for engine switching. The loop is 8,340 feet long. It will be used and maintained throughout the C. V. Spur operation life.

There are seven (7) separate conveyor runs at the C. V. Spur. All grades for the conveyors are shown on Figure 3-7. All surface conveyors are covered and equipped with walkways. These conveyors will be used throughout the life of the C. V. Spur facility.

Compliance

This facility was constructed pre-Law. The applicant needs to describe how the transportation facilities will be maintained and how the area will be restored to comply with this section.

Stipulation 817.180-(1)-PGL

1. The applicant shall describe how the transportation facilities will be maintained and restored to prevent damage to fish, wildlife and related environmental values, as well as additional contributions of suspended solids to streamflow or runoff outside the permit area. In addition, the applicant must control and minimize degradation of water quality and quantity, control and minimize erosion and siltation and control and minimize pollution.

UMC 817.181 Support Facilities and Utility Installations

Existing Environment and Applicant's Proposal

All buildings and structures at the C. V. Spur are shown on Plates 3-1 and 3-2.

There are no present plans to modify or reconstruct any structures at this site.

Compliance

The applicant will comply with this section when all of the support facilities listed are committed to being maintained and used in a manner which prevents damage to fish, wildlife and related environmental values and prevents additional contributions of suspended solids to streamflow or runoff outside the permit area.

Stipulation 817.181-(1)-PGL

1. The applicant will commit that all of the support facilities will be maintained and used in a manner which prevents damage to fish, wildlife and related environmental values and prevents additional contributions of suspended solids to streamflow or runoff outside the permit area.

UMC 822.1-.14 (785.19) Alluvial Valley Floors

Existing Environment and Applicant's Proposal

The C. V. Spur MRP does not contain a separate section addressing the Alluvial Valley Floor issue. Page 4-6 of the MRP notes that prior to establishment of the coal processing facilities at C. V. Spur, the land was capable of supporting very limited cattle grazing. Attempts to establish cultivated crops were not feasible.

Compliance

Based on the information contained in the MRP and an analysis of the hydrologic impacts of the C. V. Spur operation, it is the conclusion of the regulatory authority pursuant to UMC 785.19(c)(3)(i) that:

1. Neither coal extraction nor significant physical disturbance of the surface or ground water regime will occur from the operation of C. V. Spur.
2. The area to be affected by C. V. Spur will provide negligible support for production from farming.

Therefore, the requirements of UMC 785.19(d) and (e) and UMC 822 are waived.

Stipulations

None.

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RECLAMATION COST SUMMARY

| | |
|-----------------------------------|---------------------------------|
| 1. Removal Structures | \$ 649,960.00 |
| 2. Grading and Ripping | 223,200.00 |
| 3. Revegetation Activities | 334,979.00 |
| 4. Foreman Supervising Activities | <u>42,000.00</u> |
| | \$1,295,139.00 |
| 10% Contengency | <u>\$ 129,514.00</u> |
| | \$1,424,653.00 - (1983 Dollars) |

SCHEDULE OF RECLAMATION

Upon completion of operations at C. V. Spur, the following approximate schedule will be followed for final reclamation. Time frames are approximate and may overlap, decreasing the overall time. The sequence of events may also be slightly altered. The procedure will begin within 180 days of termination of operations.

PROCEDURE, TIME FRAME, ACCUMULATIVE TIME

| <u>PROCEDURE</u> | <u>TIME FRAME</u> | <u>ACCUMULATIVE TIME</u> |
|--|-------------------|--------------------------|
| Remove Structures | 44 weeks | 44 weeks |
| Reclaim Areas | 18 weeks | 62 weeks |
| Topsoil and Soil Placement | 4 weeks | 66 weeks |
| Reseeding | 2 weeks | 68 weeks |
| Mulching | 2 weeks | 70 weeks |
| *Removal of Sediment Ponds and Diversions | 2 weeks | |

*To be completed after the revegetation cover meets the standards described in Section 3.5.3.1.

COST OF RECLAMATION

A detailed estimate of the costs of reclamation at C. V. Spur is presented below. The following is a list of equipment and rates used in developing the cost estimate.

| <u>ITEM</u> | <u>RATE</u> |
|--|-------------|
| End-Dump Truck + Operator | \$440/day |
| Front-End Loader (988) + operator | \$1,440/day |
| Cat + Operator (D-9) | \$1,395/day |
| Crane + Operator (Grove RT-75S 50T) | \$930/day |
| Backhoe + Operator (Cat 235) | \$1,560/day |
| Laborer (operator included @ \$120/day) | \$100/day |
| Mobilization and Demobilization | \$4,000 |

COST ESTIMATE FOR C. V. SPUR RECLAMATION

Procedure

Removal Structures

A. Silo

| | |
|---|------------------|
| 2 trucks + operator X 25 days X \$440/day = | \$ 22,000 |
| 1 loader + operator X 25 days X \$1,440/day = | 36,000 |
| 1 cat + operator X 10 days X \$1,395/day = | 13,950 |
| 10 laborers X 30 days X \$100/day = | 30,000 |
| | <u>\$101,950</u> |

B. Stacking Tubes (4)

| | |
|---|-----------------|
| 2 trucks + operator X 15 days X \$440/day = | \$13,200 |
| 1 loader + operator X 15 days X \$1,440/day = | 21,600 |
| 1 cat + operator X 10 days X \$1,395/day = | 13,950 |
| 10 laborers X 20 days X \$100/day = | 20,000 |
| | <u>\$68,750</u> |

C. Thickener

| | |
|--|-----------------|
| 2 trucks + operator X 8 days X \$440/day = | \$ 7,040 |
| 1 loader + operator X 8 days X \$1,440/day = | 11,520 |
| 1 cat + operator X 5 days X \$1,395/day = | 6,975 |
| 10 laborers X 10 days X \$100/day = | 10,000 |
| | <u>\$35,535</u> |

D. Plant

| | |
|---|------------------|
| 2 trucks + operator X 30 days X \$440/day = | \$ 26,400 |
| 1 loader + operator X 30 days X \$1,440/day = | 43,200 |
| 1 cat + operator X 10 days X \$1,395/day = | 13,950 |
| 1 crane + operator X 50 days X \$930/day = | 46,500 |
| 10 laborers X 60 days X \$100/day = | 60,000 |
| | <u>\$190,050</u> |

E. Conveyors (7)

| | |
|---|-----------------|
| 1 crane + operator X 20 days X \$930/day = | \$18,600 |
| 2 trucks + operator X 10 days X \$440/day = | 8,800 |
| 1 loader + operator X 10 days X \$1,440/day = | 14,400 |
| 6 laborers X 20 days X \$100/day = | 12,000 |
| | <u>\$53,800</u> |

F. Reclaim Tunnels (2)

| | |
|---|-----------------|
| 2 trucks + operator X 10 days X \$440/day = | \$ 8,800 |
| 1 cat + operator X 15 days X \$1,395/day = | 20,925 |
| 1 crane + operator X 10 days X \$930/day = | 9,300 |
| 1 loader + operator X 20 days X \$1,440/day = | 28,800 |
| 6 laborers X 20 days X \$100/day = | 12,000 |
| | <u>\$79,825</u> |

G. Truck Dumps (2)

| | |
|---|-----------------|
| 2 trucks + operator X 5 days X \$440/day = | \$ 4,400 |
| 1 crane + operator X 5 days X \$930/day = | 4,650 |
| 1 loader + operator X 10 days X \$1,440/day = | 14,400 |
| 6 laborers X 15 days X \$100/day = | 9,000 |
| | <u>\$32,450</u> |

H. Railroad

| | |
|---|-----------------|
| 2 trucks + operator X 10 days X \$440/day = | \$ 8,800 |
| 1 loader + operator X 10 days X \$1,440/day = | 14,400 |
| 1 cat + operator X 5 days X \$1,395/day = | 6,975 |
| 6 laborers X 15 days X \$100/day = | 9,000 |
| | <u>\$39,175</u> |

I. Lab/Shop/Warehouse

| | |
|---|-----------------|
| 2 trucks + operator X 10 days X \$440/day = | \$ 8,800 |
| 1 loader + operator X 10 days X \$1,440/day = | 14,400 |
| 1 crane + operator X 5 days X \$930/day = | 4,650 |
| 1 cat + operator X 3 days X \$1,395/day = | 4,185 |
| 6 laborers X 15 days X \$100/day = | 9,000 |
| | <u>\$41,035</u> |

J. Sample Building

| | |
|--|-----------------|
| 2 trucks + operator X 3 days X \$440/day = | \$ 2,640 |
| 1 loader + operator X 3 days X \$1,440/day = | 4,320 |
| 1 crane + operator X 3 days X \$930/day = | 2,790 |
| 1 cat + operator X 1 day X \$1,395/day = | 1,395 |
| 4 laborers X 5 days X \$100/day = | 2,000 |
| | <u>\$13,145</u> |

K. Pump House

| | |
|--|----------------|
| 2 trucks + operator X 2 days X \$440/day = | \$1,760 |
| 1 loader + operator X 2 days X \$1,440/day = | 2,880 |
| 1 cat + operator X 2 days X \$1,395/day = | 2,790 |
| 4 laborers X 4 days X \$100/day = | 1,600 |
| | <u>\$9,030</u> |

L. River Pump System

| | |
|---|----------------|
| 2 trucks + operator X 1 day X \$440/day = | \$ 880 |
| 1 loader + operator X 1 day X \$1,440/day = | 1,440 |
| 1 cat + operator X 1 day X \$1,395/day = | 1,395 |
| 2 laborers X 2 days X \$100/day = | 400 |
| | <u>\$4,115</u> |

M. Water Tank

| | |
|--|----------------|
| 1 crane + operator X 2 days X \$930/day = | \$1,860 |
| 2 trucks + operator X 2 days X \$440/day = | 1,760 |
| 2 laborers X 3 days X \$100/day = | 600 |
| | <u>\$4,220</u> |

N. Substation

| | |
|--|----------------|
| 2 trucks + operator X 2 days X \$440/day = | \$1,760 |
| 1 loader + operator X 2 days X \$1,440/day = | 2,880 |
| 2 laborers X 3 days X \$100/day = | 600 |
| | <u>\$5,240</u> |

O. Subdrains

| | |
|---|-----------------|
| 1 backhoe + operator X 3 days X \$1,560/day = | \$ 4,680 |
| 1 loader + operator X 3 days X \$1,440/day = | 4,320 |
| 2 trucks + operator X 3 days X \$440/day = | 2,640 |
| 2 laborers X 5 days X \$100/day = | 1,000 |
| | <u>\$12,640</u> |

Mobilization and Demobilization

| | |
|--|------------------|
| | \$690,960 |
| | \$ 4,000 |
| | <u>\$694,960</u> |

Grading and Ripping

| | | |
|----------------------------------|---------------|-----------|
| A. Refuse Piles | | |
| 2 cats X 30 days X \$1,395/day = | \$ 83,700 | |
| B. Coal Storage Pads | | |
| 2 cats X 10 days X \$1,395/day = | 27,900 | |
| C. Plant Area | | |
| 1 cat X 5 days X \$1,395/day = | 6,975 | |
| D. Truck Dump Grades | | |
| 2 cats X 10 days X \$1,395/day = | 27,900 | |
| E. Railroad Grade | | |
| 2 cats X 20 days X \$1,395/day = | 55,800 | |
| F. Backfilling Ponds (7) | | |
| 1 cat X 15 days X \$1,395/day = | <u>20,925</u> | |
| | \$223,200 | \$223,200 |

Revegetation Activities

| | | |
|--|--------------|-----------|
| A. Topsoil and Soil Placement | | |
| 2 loaders + operator X 30 days X \$1,440/day = | \$86,400 | |
| 2 trucks + operator X 10 days X \$440/day = | <u>8,800</u> | |
| | \$95,200 | |
| B. Seedbed Preparation | | |
| 117 acres X \$200/acre = | \$23,400 | |
| C. Seeding | | |
| 117 acres X \$544.69/acre | | |
| Hydroseed: Seed = \$444.69/acre | | |
| Labor = \$100/acre = | \$63,729 | |
| D. Mulching (as required) | | |
| 117 acres X \$350/acre = | \$40,950 | |
| E. Fertilizing | | |
| 117 acres X \$100/acre = | \$11,700 | |
| F. Maintenance and Monitoring-\$10,000/yr for 10 yrs | \$100,000 | \$334,979 |

Supervision

Foreman to Supervise Activities \$600/wk X 70 wks = \$42,000 \$42,000

Note: All figures based on 1983 dollars.

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 sacaton (<u>Sporobolus airoides</u>) | .75 | \$ 3.30 | \$ 2.48 |
| Inland saltgrass (<u>Distichlis spicata</u>) | 1 | NA | NA \$ 95.03 |
| <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 |
| | | | \$ 82.16 |
| <u>Shrubs</u> | | | |
| Winterfat (<u>Ceratoides lanata</u>) | 3 | \$18.50 | \$ 55.50 |
| Shadscale (<u>Atriplex confertifolia</u>) | 4 | \$ 8.00 | \$ 32.00 |

| 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</u> var. <u>albicaulis</u>) | 1.5 | \$68.00 | \$102.00 |
| Four-wing saltbush (<u>Atriplex canescens</u>) | <u>3</u> | \$ 6.00 | \$ 18.00 |
| | | | <u>\$267.50</u> |
| TOTAL (for broadcast or hydroseeding) | <u>33.25</u> | | <u>\$444.69</u> |

(1/2 rate for drill seeding)

PERMANENT RECLAMATION SEED MIXTURE
PRICE RIVER SYSTEM

| | Acreage 1 Pounds PLS/Acre | Price Per Pound | Cost | Number Seeds/Pound |
|---|------------------------------|--------------------------------|-----------------|-----------------------|
| Streambank wheatgrass | 5 | \$ 3.90 | \$ 19.50 | 160,000 |
| Tall wheatgrass | 3 | \$.85 | \$ 2.55 | 159,000 |
| Alkali sacaton | 2 | \$ 3.30 | \$ 6.60 | 1,750,000 |
| Galleta | 3 | \$26.25 | \$ 78.75 | 79,000 |
| | <u>13</u> | | <u>\$107.40</u> | |
| <u>Containerized or Bare Root Stock</u> | | <u>Number Per Acre</u> | | |
| Rubber rabbitbrush | | 200 - \$158 (\$.79 per plant) | | |
| Sandbar Willow | | 150 - \$118 | | |
| | | <u>\$279/acre</u> | | |

STIPULATIONS DOCUMENT

Beaver Creek Coal Company
C. V. Spur Preparation Plant
ACT/007/022, Carbon County, Utah

March 5, 1984

Stipulation 805.11-(1-4)-PGL

1. (a)(2) Costs must be included for the mobilization and demobilization of equipment.
2. There are two permanent seed mixtures proposed. However, there are no acreages given for each. Please clarify.
3. Production rates to determine the number of shifts should be included.
4. Maintenance and monitoring includes hydrologic, erosional, as well as vegetative. The present \$1,500 per year is too low. Please adjust.

Stipulation 817.21-.25-(1-5)-EH

1. The acreage figures of pre-Law and post-Law disturbance must be given.
2. Total acreage figures of disturbed and proposed disturbance must be given.
3. The applicant must commit in writing to removal of 10 inches of any future disturbance of the Killpack series.
4. Table 8-6 must be corrected to reflect the 10 inch removal depth on the Killpack series.
5. The applicant must submit figures supporting the claim that there is enough stockpiled soil material to cover the post-Law disturbance and the refuse disposal site with a minimum of six inches of soil.

Stipulation 817.43-(1-2)-TM

1. The applicant must show the location of culvert C-14 on Plate 3-2.
2. The applicant must show the location of necessary sediment control measures associated with erosive exit velocities from culverts and ditches. The only problem area determined in the review is the exit velocity from culvert C-5. The applicant must demonstrate that this culvert exit area has adequate protection.

Stipulation 817.46-(1-4)-JW

The applicant shall:

1. Provide accurately scaled drawings and cross-sections including side slopes for pond sides and side slopes for the two gravel dikes for inclusion in the MRP. The porosity of the gravel dikes must also be provided.
2. Provide revised page 3-31 of the MRP to reflect the current configuration of the outlet structure for pond #6.
3. Provide a revised plan to assure that the 10-year, 24-hour runoff volume in sediment ponds is not impeded by plant or thickener overflows.
4. Provide a plan for inspection of ponds in conjunction with UMC 817.46(t).

Stipulations 817.47-(1)-TM

1. What measures have been taken to prevent erosion of discharge structures? The applicant must provide this information for ditches and culverts where necessary. This information should include riprap size according to expected velocities and placement location.

Stipulation 817.52-(1)-JW

1. The applicant must make a written commitment to monitor discharge from pond #6 when they occur.

Stipulation 817.86-.87-(1)-PGL

1. A commitment is needed by the applicant that in the event any coal processing waste fire did happen to occur, it would be handled in accordance with a plan approved by MSHA and the regulatory authority. Before any burned coal processing waste or other materials or refuse is removed from a disposal area, approval must be obtained by the regulatory authority and that plan shall be certified by a qualified engineer.

Stipulation 817.97-(1-3)-SC

1. The applicant shall commit to not using persistent pesticides on the area during operations and reclamation activities unless approved by the regulatory authority.
2. The applicant shall commit to promptly reporting the presence in the permit area of any threatened or endangered species or any bald or golden eagle not previously reported to the regulatory authority.

3. The applicant shall submit Plate 10-1 showing active and inactive white-tailed prairie dog burrows.

Stipulation 817.99-(1)-PGL

1. The applicant shall make the commitment that any time a slide occurs which may have a potential adverse effect on public, property, health, safety or the environment, the person who conducts the mining related activity shall notify the Division by the fastest available means and comply with any remedial measures required by the Division.

Stipulation 817.103-(1)-EH

1. The applicant must supply a volume estimate of the soil material required to cover the refuse disposal site.

Stipulation 817.111-.117-(1)-SC

1. The applicant shall commit to measuring and comparing productivity of the reference area and revegetation area for bond release.

Stipulation 817.131-(1)-EH

1. The applicant must commit in writing to notify the regulatory authority of temporary cessation in accordance with this section.

Stipulation 817.150-.156-(1)-PGL

1. The applicant shall describe the reclamation of the roads for this processing facility.

Stipulation 817.180-(1)-PGL

1. The applicant shall describe how the transportation facilities will be maintained and restored to prevent damage to fish, wildlife and related environmental values, as well as additional contributions of suspended solids to streamflow or runoff outside the permit area. In addition, the applicant must control and minimize degradation of water quality and quantity, control and minimize erosion and siltation and control and minimize pollution.

Stipulation 817.181-(1)-PGL

1. The applicant will commit that all of the support facilities will be maintained and used in a manner which prevents damage to fish, wildlife and related environmental values and prevents additional contributions of suspended solids to streamflow or runoff outside the permit area.