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STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

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December 12, 1984

Mr. Dan W. Guy, Manager  
Permitting and Compliance  
Beaver Creek Coal Company  
P. O. Box 1378  
Price, Utah 84501

Dear Mr. Guy:

RE: Additional Technical Deficiencies, Beaver Creek Coal  
Company, Huntington Canyon #4 Mine, ACT/015/004, #2, Emery  
County, Utah

The Division has completed its review of Beaver Creek Coal Company's (BCCC) most recent submittal (November 9, 1984) for the above referenced Mining and Reclamation Plan. There are remaining technical deficiency concerns which still must be addressed by BCCC prior to the Division's completion of the Final Technical Analysis. These items are fully enumerated in the enclosed document and will be carefully discussed with BCCC during a meeting December 12, 1984. It is sincerely hoped that after this meeting, BCCC can clearly resolve these remaining deficiencies and submit the appropriate response by no later than January 9, 1985.

Should you have any questions during the formulation of the response to these deficiencies, please contact the Division at your earliest convenience.

Sincerely,

Ronald W. Daniels  
Acting Administrator  
Mineral Resource Development  
and Reclamation Program

MMB/btb

cc: Allen Klein  
Mary Humphrey  
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8813R-34

## TECHNICAL DEFICIENCIES

Beaver Creek Coal Company  
Huntington #4 Mine  
ACT/015/004, Emery County, Utah

December 12, 1984

### UMC 771.23 Permit Applications - General Requirements for Format and Contents

Please note that the Mining and Reclamation Plan (MRP) previously (prior to November 1984) contained in Appendix 7, entitled Sediment Pond Modification Approval. Therefore, the "new" Appendix 7 should be renumbered accordingly. In addition, all appendices must be added to the Table of Contents.

### UMC 782.13 Identification of Interests

Plates 3-1 and 3-1A do not designate the permit area boundary, not whether the pump station, etc., are within it. These Plates must clearly designate the permit area boundary (see comments under UMC 784.23 below).

### UMC 783.19 Vegetation Information

Sufficient information needed to describe the riparian vegetative community and establish criteria for determining bond release has not been provided. A reference area must be established and adequately sampled for cover, woody plant density and productivity or an alternative method for determining bond release criteria must be described.

It is unclear from the discussion how much riparian habitat has been disturbed. Is it 400 ft<sup>2</sup> (page A-1) or 120 m<sup>2</sup> (page B-1)? In addition, if other vegetative types have been disturbed by the pumphouse, sediment pond, etc., they must be described and completely addressed.

All additional information associated with this additional disturbance must be incorporated into the appropriate sections of the plan.

### UMC 784.13 Reclamation Plan

The write up in Appendix #7 concerning the reclamation of the stream channel in the location of the pumphouse and holding pond does not discuss the use, source and quality of soil material.

The applicant must fully address the use (amount required, depth, etc.), source (where is the soil material at present) and quality (suitability of the soil material for reclamation, including chemical and physical analysis).

UMC 784.23 Operation Plan: Maps and Plans

(b) The area of land to be affected within the proposed mine plan must be identified. There has been continual confusion with the Huntington #4 permit area vs. area of disturbance and inconsistencies in the narrative. To eliminate the confusion once and for all the following maps need to be updated with the permit area clearly shown. It should be understood by the operator that a legend is included on all maps with identifying symbols clearly marked, a north arrow and scale. For example, it is difficult to distinguish the mine permit area on Plate 3-1A.

The following maps need clear permit areas identified:

<u>Plate Number</u>	<u>Name</u>
3-1	Surface Facilities Map
3-1A	Surface Facilities Map
3-1B	Pumphouse Area (Mill Fork)
3-2A	Transportation Facilities
3-8	Postmining Topography
3-9	Postmining Topography

Figures

4-1, 4-2, 4-3	Where exactly is the permit area vs. the special use permit area?
7-6	Sediment Ponds and Diversions
7-8	Surface Drainage
9-1	Vegetation Map

(b)(3) The map that clearly indicates the bonded area is needed.

UMC 805.11 Bond Determination

There are seven missing structures in the removal of structures section of the bond estimate. They are: middle water tank; pumphouse; fuel tanks; upper water tank; bridge; sewer system; mine building; and, trailers.

Where is the soil placement for the pumphouse and sediment ponds in the estimate?

The restoration of the natural drainage needs other equipment and materials included (as outlined in Appendix 7).

Where are the riparian seed mixes in the bond estimate? Item 6 in the assumptions seems to be in error.

The costs for the removal of culverts to the landfill as stated on page 3-58 must be included.

The substation removal needs time justification, i.e., efficiency factors, etc.

The equipment performances as stated in assumption #5 are inconsistent throughout the bond estimate. Please be concise.

Does mulchinf include tackifier as outlined in Appendix 7?

The 900 foot coal road will be reclaimed (page 3-5 and 3-9b), but it is not included in the bond estimate. Please include.

Foundation removal must be clearly outlined in the estimate (as stated on page 3-58).

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

The revised Figure 7-7 submitted by the applicant does not show all the culverts listed in Table 7-19. In addition, this Figure does not show the areas listed in Table 7-17, USLE Estimates of Sediment Yield for Huntington #4 Mine Facilities Area. It is the Division's suggestion to the applicant that Plate 3-1 be accurately updated to show the diversion locations and culvert locations. The actual drainage areas can be approximated from Figure 7-7. Regarding the information in Table 7-17, the applicant must use a clear figure to demonstrate the location of these areas and why there is a discrepancy between the areas listed in Table 7-17 and the areas listed in Table 7-16 and Figure 7-7. Once this information has been provided, the Division can proceed with the review.

UMC 817.44 Hydrologic Balance: Sediment Control Measures

The Division has determined that the applicant must show that the combination of channel and floodplain is capable of 100-year, 24-hour precipitation event for permanent divisions. UMC 817.44(a) states "Flow from perennial and intermittent streams and ephemeral streams with drainage areas greater than one square mile within the permit area may be diverted, if the diversions. . . ." This regulation subsection was referenced by the applicant in response to the Division's technical deficiency. The question is not whether the ephemeral stream can be diverted as shown in subpart (a) of UMC 817.44, but whether the combination of channel, bank and floodplain configuration shall be adequate to pass safely the peak runoff from the 100-year, 24-hour precipitation event for the permanent diversion of this ephemeral stream, as shown in subpart (2) of UMC 817.44.

Therefore, all previous information requested still applies and the applicant has not adequately addressed this regulation regarding reclamation of this ephemeral stream channel, bank and floodplain.

In the Division's hydrologic review of the Appendix 7 information submitted by the applicant regarding the pumphouse reclamation plan, the following questions must be addressed:

1. What are the peak flow predictions for Mill Fork?
2. What is the ripap size for the area upstream of the structure?
3. What is the durability of the log structure, i.e., number of years it can be expected to remain?
4. Has this structure (in No. 3 above) been successfully used elsewhere?
5. What is meant on page 3, third paragraph, last sentence which is incomplete? Where will the culvert be laid, i.e., 100 feet from what?
6. Has the applicant considered leaving the concrete wall, knocking down the high parts and minimizing instream disturbance?

UMC 817.45 Hydrologic Balance: Sediment Control Measures

The applicant has responded to this technical deficiency by showing on Plate 3-1a straw bales either surrounding these snow storage areas or apparently lined up downstream of these areas. The Division feels this is an acceptable solution to an obvious problem, but requests that the operator take considerable care in the placement of these straw bales so runoff will not go around or under the straw bales into the drainage. A berm and a small gabion structure placed at the low point of the berm would be an alternative method of treating this runoff problem if the straw bales proved ineffectual.

The applicant must also address the discrepancy pointed out under UMC 817.43 regarding the information found in Table 7-17 and why it does not agree with the disturbed area drainage calculations found in Table 7-16. A map must be submitted supporting and showing why the information in Table 7-17 is correct and accurate.

UMC 817.99 Slides and Other Damage

Page 3-14 simply states the operator will notify the Division in the event a slide occurs. The applicant must commit to abiding by appropriate mitigation required by the Division.

UMC 817.101 Backfilling and Grading: General Requirements

The retained highwalls must be explicitly shown on Plate 3-8. They are not clearly shown on Plate 3-9, as stated by the applicant.

UMC 817.111-.117 Revegetation

Several changes to the revegetation plan or the riparian area are suggested:

1. The proposal to reestablish conifers in the reclaimed area is not advisable since sufficient cover for wildlife is already present adjacent to the stream. Instead, more benefit would be gained by leaving the riparian area as an open shrubland comprised of browse species.
2. The seed mixture proposed for the riparian area would provide at least 200 pure live seeds/ft<sup>2</sup> (grasses only). The Soil Conservation Service (SCS) recommends a rate of 20 pure live seeds/ft<sup>2</sup> (grasses). The proposed rate should be adjusted down to approximate the suggested SCS seeding rates. Also, the addition of some forbs in the seed mix would be beneficial to wildlife.
3. The plan to establish an oats cover crop is included in the revegetation plan. This should be omitted. The riparian area is not considered a harsh site and no benefits would be derived from the cover crop. An unmanaged cover crop as proposed would only increase competition to native species establishment.
4. Seedling transplant rates as proposed calculate out to over 15,000 seedlings per acre. This is in addition to seeding of shrubs. The rate appears excessive and extremely costly. Estimates for the number of seedlings to be planted should be based on results of woody plant density sampling and associated bond release criteria and success of shrub establishment from seed.
5. It is stated that the area will be monitored to determine when bond release parameters are achieved (page 10). However, no bond release criteria have been established. These values must be clearly stated and the methods to compare them with the revegetated area must be described.