

June 12, 1987

TO: File

FROM: James S. Leatherwood 

Re: Mid-Term Review, June 3, 1987 Submittal, Blackhawk Coal Company, ACT/007/002, Folder No. 2, Carbon County, Utah

The above mentioned mine reclamation plan has been reviewed and found not to be complete or technically adequate. The following concerns must be addressed prior to determining the MRP complete or technically adequate.

UMC 783.21 Soil Resources Information - JSL

This section is not complete. The Soil Conservation Service (SCS) soil survey, Exhibit 11, Vol. 5, does not adequately correspond to Blackhawk Coal Company's permit area. The soil association maps and Soil Interpretation Records are illegible. These maps must: 1) delineate the permit boundary; 2) clearly identify all soil series; 3) be at a minimum scale of 1:6000; and 4) identify all soil sample locations. Map 29 must also be updated to include sample site number 4.

The MRP should include a Soils Interpretation Record for each soil series. Data found in table 8-1, page 8-4 must be correlated with each soil series. Each and every soil phase to be disturbed must have one sample representative.

UMC 784.11 Operation Plan: General Requirements - JSL

(b)(4) The applicant has not adequately addressed this section. As outlined on page 3-4, Vol. 1, the North and South end of the Willow Creek facility composes primarily of coal waste. This material must be disposed of according to UMC 817.71-.74 and 817.103. The acid- or toxic- forming potential of the material must be analyzed. The following list the parameters for analysis: boron, selenium, percent pyritic sulfur, percent organic sulfur, percent calcium carbonate, pH, acid base potential, electrical conductivity, calcium, sodium, magnesium, and sodium adsorption ratio. If the material is found to be an acid- or toxic- forming material the MRP must also address UMC 817.48.

Specific treatments for any acid- or toxic- forming materials shall be reviewed by the Division upon submittal of the sampling analysis and the specific treatment planned at that time. The number and depth of samples is dependent upon the extent of the coal waste material involved. Hence, the extent of coal waste and disposal location must be accessed. Cross-sections, mass balance, and contour and location maps must be submitted.

The statement referring to Area 1 and Area 2 on page 3-16 is confusing. Which map does this correspond to. Map 9 does not identify any such areas.

UMC 784.13 Reclamation Plan: General Requirements - JSL

(b)(3) The MRP does not completely address this section. Plans for backfilling and grading, soil stabilization, compacting and grading must be submitted. Include disturbed and final topography contour maps, mass balance table, and disturbed and final topography cross-sections in accordance with UMC 817.101-.106. Slope data should include minimum slopes, maximum slopes, static safety factor, mean and percentage of each slope. Slopes must be reduced to the minimum amount as necessary to achieve a minimum static safety factor of 1.3. All final grading shall be constructed parallel to the contour. Methods such as scarification of overburden and compacted areas should be discussed in the interest of ensuring good overburden-soil contact. The depth of scarification must be determined by the depth of available soil and the total length of effective root growth. At a minimum, scarification must be at a six inch depth.

(b)(4) Map 8 does not adequately delineate the topsoil borrow area. Please amend. All proposed topsoil substitute materials must comply with UMC 817.22(e). As the MRP outlined on page 9-27, section 9.3, Vol. 1, the development of a successful revegetation plan entails a detailed scientific analysis. Hence, the requirement for test plots is essential to verify that the substitute topsoil material will be a viable medium for reclamation success. The proposed six inch depth of redistribution for adequate success is unverifiable to date. Hence the redistribution depth will be one of the variables within the test plot program. Other variables may include the types, rates, and application timing and procedure of various amendments and seed mixes.

Page 3
Technical Memo
ACT/007/002
June 12, 1987

All substitute material must analyzed for the following: color, texture, pH, organic carbon, saturation percentage, alkalinity, electrical conductivity, calcium carbonate percentage, available phosphorus, total nitrogen, sodium adsorption ratio, percent organic carbon, and potassium. All samples must be taken to the expected excavation depth of the proposed substitute materials. Samples must be at one foot intervals.

The mine plan must include a map showing the location of all proposed and existing topsoil stockpiles in proximity to all operational areas. The plan must include designs for all drainage diversions away from the topsoil stockpile(s). Include the volume and maximum slopes of the topsoil stockpile. Depth and slope must be minimized to the greatest extent practicable to ensure against an anaerobic soil environment. The plan must detail the type and rate of mulch, and the seed mix must include the rate and mixture. Leguminous vegetation is recommended to enhance soil fertility. The seed mixture should complement the postmining land use.

The borrow area must be clearly identified. Map 8 is not specific. Please amend. The plan must also include a mass balance of material to be excavated and redistributed.

Soil redistribution must be carried out when the soil is dry. Working on wet soil results in excessively compacted soil. Detail the specific equipment and operation plan that will be used for topsoil redistribution and seed bed preparation.

The soils map must delineate all areas that will be disturbed and that are too steep for topsoil removable as referred to in section 8.4, page 8-8. The percent slopes and rockiness of each location must be clearly identified. Prior to disturbance of these area the applicant must demonstrate that the proposed substitute soils will be suitable for reclamation success pursuant to UMC 817.22(g)(2) and UMC 817.22(e).

cc. D. Darby
S. Linner

jsl
0534R-18