



0008

STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

PRO/043/008
#2

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November 12, 1986

Mr. Richard Blonquist
Summit Coal Company
P. O. Box 646
Coalville, Utah 84017

FILE COPY

Dear Mr. Blonquist

Re: Determination of Completeness, Mining and Reclamation Plan,
Boyer Mine, PRO/043/008, Folder No. 2, Summit County, Utah

The Division has received information submitted October 24, 1986, in response to the Initial Completeness Review of August 29, 1986. The recent submittal has answered the majority of the Division's concerns, however, there are a few sections that require further information, as outlined in the enclosed Determination of Completeness review. Technical deficiencies have also been identified and made a part of this review. This review does not contain any deficiencies relating to the hydrology sections of the regulations, since the final SOAP report has not yet been received.

An adequate response to the items in pp. 1-5 of this review and to any potential hydrology deficiencies will be necessary before the Division can determine the plan complete, which will allow initiation of publication of Notice and the requisite public comment period.

Please contact myself or Susan Linner if we can provide assistance.

Sincerely,

L.P. Braxton

L. P. Braxton
Administrator
Mineral Resource Development
and Reclamation Program

SCL:jvb
Enclosure
cc: D. Guy, Blackhawk Engineering
A. Klein
B Team
0028R-73

Determination of Completeness
Summit Coal Company
Boyer Mine
PRO/043/008
Summit County, Utah

November 12, 1986

UMC 782.13 Identification of Interests - DL

- (a)(2) The mineral rights ownership has been clarified on Plate 2-1, but still needs to be described in Table 2-1A.
- (e) The applicant has not provided complete addresses for all contiguous mineral rights owners, including Champling Petroleum Company, and the Utah Land Board (this is probably an incorrect reference and should be corrected to Utah Division of State Lands and Forestry). A complete address for Bow Valley Coal Resources, Inc. should also be given.

Table 2-1A (item 4) does not identify G & M Jones as contiguous landowners, though they are shown as such on Plate 2-1. Either the Table or the Plate must be corrected.

UMC 782.15 Right of Entry and Operation Information - SCL, DL

Appendix 2-2, provided to show right of entry for the surface, is invalid, since the lease was signed in 1981 (or early 1982) and was valid for only 3 years. Summit Coal Company could not have met the terms for automatic renewal stated on p.4 of the agreement, and therefore must demonstrate that a valid lease is still in effect.

The applicant has provided no documentation as to the right of entry on the mineral leases and must do so.

UMC 782.17 Permit Term Information - DL

- (a) Section 2.6.5 should reference Plate 3-2, not 3-3.

UMC 782.19 Identification of Other Licenses and Permits - SCL, DL

The applicant must show the address of the issuing authority and approval dates in Table 2-3.

The applicant must include a copy of the approval letter form the Bureau of Air Quality in Chapter 11.

UMC 782.20 Identification of Location of Public Office for Filing
of Application - SCL

Section 2.10 contains the wrong address for DOGM. The applicant must also file all application materials at the Summit County Courthouse.

UMC 782.21 Newspaper Advertisement and Proof of Publication - SCL

The public notice proposed in Figure 2-3 is not acceptable. Public notice must be in accordance with UMC 786.11(a). Notice must be published for four consecutive weeks, with comments accepted 30 days from the date of last publication. Comments should be sent to Dianne Nielson at the correct Division address.

UMC 783.19 Vegetation information - LK

The location of the reference area is not oriented correctly (as to what was approved in the field) on the range site map. Also, please indicate how the reference area will be permanently marked in the field.

UMC 783.24-25 Maps: General Requirements, Cross Sections, Maps, and
Plans - JRH

This section is considered complete but not technically adequate.

Maps, plans and cross sections provided in the MRP need to be revised to reflect those changes made in the exploration plan for the operation and other intended revisions to the MRP since the latest submittal of the MRP to the Division. Primarily the submittal does not have a reclamation map and the surface facilities map does not delineate the disturbed area nor does it show the total disturbed area in acres.

UMC 784.11 Operation Plan: General Requirements - JRH

Waste facilities will have to be modified to include sediment pond waste materials. Refer to comments made in the technical deficiencies section of this review.

A description explaining the construction, modification, use, maintenance, and removal of the proposed facilities must be incorporated into the plan. Since most of the facilities of the operation currently exist as a result of exploration operations, the text of the MRP should be revised to reflect those facilities. Basically, this section should deal with the proposed facilities which are in addition to those existing facilities.

UMC 784.12 Operation Plan: Existing Structures - JRH

This section is considered complete but may not be technically adequate.

UMC 784.13 Reclamation Plan: General Requirements - JRH

Upgrading the facilities from an exploration to a mining operation will require the commitment of the applicant to incorporate all facilities and disturbances resulting from exploration work into the Mining and Reclamation Plan.

The reclamation plan in the MRP needs to be revised to include changes in the operation plan. The applicant should closely review and incorporate into the plan, all of the requirements under this section.

UMC 784.13 Reclamation Plan: General Requirement - JSL

- (b)(7) The applicant states that there are no acid- or toxic-forming materials on site. However, data submitted in previous EMR responses indicates a sulfur content of 0.17 to 4.20 percent (American Chemicals and Research Laboratories). Based on this information the coal material has an acid production potential (APP) equal to -5.3 to -131.25 tons $\text{CaCO}_3/1000$ tons of material. An Acid Base Potential (ABP) of -5 tons $\text{CaCO}_3/1000$ tons material is defined as an acid or toxic forming material. However, to fully determine the ABP one must also look at the neutralization potential (NP). The ABP is then determined by the following: $\text{ABP} = \text{APP} - \text{NP}$ where units are in tons $\text{CaCO}_3/1000$ tons material equivalence. The NP analysis has not been determined for the prospective coal material. Due to the variability of sulfur in the coal, the Division recommends that the operator sample the roof, mid-seam, and floor after every 1000 feet of mine entry and crosscut (1,000 quadrants). All acid- and toxic-forming materials must be disposed of in compliance with UMC 817.48 and UMC 817.103.

Determination of Completeness

The applicant has submitted samples for analysis (appendix 60). The Division has not reviewed the results at this time, therefore, this section is incomplete.

UMC 784.13 Revegetation Plan - LK

- (b)(5)(vi) The applicant needs to provide specific information regarding post revegetation monitoring. The plan should provide a discussion of the parameters to be sampled, the frequency and timing of the sampling program, methodology to be used, and the criteria to be used to determine success of revegetation efforts.

UMC 784.16 Reclamation Plan: Ponds, Impoundments, Banks, Dams and Embankments - JRH

Since the water impoundments proposed in the mine plan are currently existing, as-builts of the sediment pond and calculations proving the adequacy of the existing facilities should be provided.

UMC 784.19 Underground Development Waste - JRH

The Operator must locate, design and provide a reclamation plan for the temporary and permanent disposal of underground development waste for the site. Although the Operator has indicated that such material will not be generated on the site it is apparent that normal operations on the site will accumulate coal and non-coal waste material. Sources of this waste material include but are not limited to fines and wastage from coal screening and handling facilities on the site, cleanup of the loadout area and the haulage roads on the site, and sediment pond waste material. The Operator must account to the location and disposition of these materials in the MRP.

UMC 784.20 Subsidence Control Plan - DD

The applicant should submit a subsidence mitigation plan which conforms to the post-mining landuse.

The applicant must describe the type of annual field survey that they intend to employ as indicated on page 3-66.

Due to the size and characteristics of the mine site, if the post-mining landuse is to remain grazing and wildlife habitat the Division will accept an annual visual survey. If fractures or disruptions occur on the surface the Division should be notified within 14 days. Mitigation measures should be conducted after ceasation of subsidence to restore the land to the post mining land use.

UMC 784.21 Fish and Wildlife Plan - LK

The applicant has not recognized the seriousness of potential impacts to the critical deer winter range. While total acreage of disturbance is relatively small, the loss of production is considered serious and must be mitigated. It is suggested that fencing an area of equal or greater acreage than the disturbed area to exclude domestic grazing for the life of the mine would provide adequate mitigation.

UMC 784.23 Operation Plan: Maps and Plans - JRH

No plans or provisions are made within the operation plan for the permanent or temporary storage of non-coal waste generate on the site.

UMC 784.25 Return of Coal Processing Waste To Underground Workings - JRH

The operator has indicated that there will be no coal processing waste returned to underground workings. In the event that the Operator wishes to return coal and non-coal waste to underground workings for permanent disposal, a commitment must be made to comply with the requirements of this section.

TECHNICAL DEFICIENCIES

UMC 784.13(b)(5) and UMC 817.111-.117 Revegetation Plan - LK

(pages 3-82 & 3-83) The mulching plan needs to be revised to show a higher rate of mulch application on steeper slopes (i.e. 3000 pounds per acre). It is recommended that the tackifier be added at a rate of 100 - 120 pounds per ton of fiber for all areas. The discussion of how tack rates are developed for various slopes could then be eliminated.

(page 3-83) Fertilizer is to be applied before seeding and is not to be incorporated in the mulch slurry. Please revise the plan to reflect this.

(page 3-85) While 1000 shrubs is acceptable for bonding purposes, please clarify the rates for the individual species. I.e., is the number indicated a percent of the total number of shrubs that will be planted as determined from post revegetation monitoring?

UMC 817.22 Soil: Removal - JSL

Throughout the reclamation plan and the EMR response, the operator has committed to various topsoil and subsoil removal depths. The operator has committed to a twelve inch topsoil and six inch subsoil redistribution depth. However at no time has a soil mass balance table or a specified depth of soil removal been presented. The applicant states in the October 10, 1984 EMR response, that the volume of useable soil is presented in Plate 8-1a. Plate 8-1a was not submitted. The operator must submit a soil mass balance table. This table should be in an accountant-like fashion, ie. credit and debit soil volumes. The exact acreage disturbed, the depth of removal, the volume of topsoil removed and stockpiled, and the location, acreage, and depth of postmining reclamation soil redistribution, must be included in this table.

Determination of Adequacy

The applicant has submitted Plate 8-1a. However as discussed in our meeting with Mr. Dan Guy on November 4, 1986, the exact volume of topsoil and subsoil stockpiled is questionable. The Division stated that a survey of the actual soil volume must be developed. The volume of actual soil must be developed into a mass balance table as described above. The applicant must also amend the acreage of disturbance discrepancy on page 3-24, 8-16 and Appendix 8-1.

UMC 817.24 Soil: Redistribution - JSL

The operator must develop a cohesive soil redistribution plan throughout the MRP. The current exploration plan and revisions have various discrepant soil redistribution depths (ie. EMR response, October 10, 1984, pg. 7; Appendix 3, Reclamation Plan, pg. 9-7 and in the Technical Adequacy response). The Division has accepted the commitment by the operator to redistribute six inches of subsoil and twelve inches of topsoil. This redistribution depth must be adhered to until such time that the Division is provided with technical data that identifies reclamation success with a lesser depth of soil. This may be accomplished through experimental test plots. The operator must consult the Division in this matter.

Determination of Adequacy

The operator has not adequately addressed this section, the operator consistently states that 6 inches of topsoil will be redistributed. The applicant must adhere to the previous plan to redistribute 6 inches of subsoil and 12 inches of topsoil, until reclamation success can be proven with a lesser depth.

The Division does recommend tilling the top six inches of redistributed topsoil to alleviate compaction. The Division also recommends tilling in 0.75 ton of alfalfa to a six inch depth into the subsoil material prior to topsoil redistribution.

Determination of Adequacy

On page 8-15 the applicant commits to rip at a 6" depth. However the applicant has not committed to till in 0.75 ton of alfalfa. The applicant must address this issue.

UMC 817.25 Soil: Nutrients and Amendments - JSL

An issue has been raised between the previous reviewer and the operator. The specific issue dealt with effectiveness of ripping as a means to adequately distribute the fertilizer throughout the soil. This issue cannot be resolved until the operator defines and commits to a specific fertilizer management plan. The Division has reviewed the fertilizer recommendation rate submitted by Native Plants Inc. The following is an approvable fertilizer management recommendation based upon Native Plants recommendation. The following plan is based on a broadcast distribution of a granular fertilizer with Division personnel on site at the time of application. The fall application should consist of Urea for the nitrogen requirement, diammonium phosphate for the phosphate requirement and potassium sulfate for the potassium requirement.

The spring fertilizer program should consist of diammonium phosphate and potassium sulfate. Based on the applicant's fertilizer recommendation (Appendix 3, Reclamation Plan, pg. 9-9) the following fertilizer and rate is recommended:

<u>Fertilizer Type</u>	<u>Analysis</u>	<u>Rate (lb/ac)</u>	
		<u>Fall</u>	<u>Spring</u>
Urea	45-0-0	111	0
Diammonium phosphate	21-53-0	142	47
Potassium Sulfate	0-0-52	75	25

The potassium rate has been reduced from that recommended, due to the usual inherent supply of potassium in these soils. The operator must change the potassium recommendation of K_2O_2 to K_2O . The following corrections must also be made: 1.) Samples 1A, 1B, 2A, 2B, and 3 sodium adsorption ratio values must be corrected to 0.38, 0.56, 0.41, 0.40, and 0.40 respectively. 2) Texture must be corrected in samples 1A and 1B to read as a Clay Loam.

Other Nutrient and Amendment changes in the MRP should include: 1) eliminating the fertilization application with the mulch, 2) change the post mining reclamation soil sampling scheme from composite sampling to individual site sampling, as composite sampling tends to dilute the soil samples, and 3) the following must be analyzed at the time of final reclamation: pH, electrical conductivity, potassium, zinc, iron, available phosphorus and texture.

Determination of Adequacy

This section has not been adequately addressed. The applicant must change the incorrect SAR and texture values and description. On page 3-83 the applicant states that fertilizer will be applied with the mulch. This is not acceptable, due to the potential salt burn from the fertilizer. Please re-submit the last page of Appendix 8-1, which describes the procedure for sampling. The submitted page is illegible.

UMC 817.71 Disposal of Excess Spoil and Underground Development Waste: General Requirements - JRH

The provisions of this section require that excess spoil and underground development waste be disposed of within the permit area. Under Utah guidelines, sediment pond waste is to be treated and disposed of in accordance with those standards set under coal processing waste and those sections which apply. The Operator must provide for both temporary and permanent waste disposal facilities for sediment pond material within the permit area.

See also those comments made under section UMC 784.19.

UMC 817.88 Coal Processing Waste: Return to Underground Workings - JRH

See those comments made under UMC 784.25.

UMC 817.89 Disposal of Non-Coal Wastes - JRH

The Operator should provide in the plan, a detailed design and analysis providing for the disposal of non-coal waste materials on the site. Several State and Federal laws govern the location and disposition of material such as oil and grease, liquid wastes, hazardous wastes, PCB's and other such materials that may be encountered on the mine site. The Operator should provide the location and proof of compliance with State and Federal regulations for any off-site facility to be used by the Operator including sanitary landfills and contractors landfills. The Operator must also commit to disposal of all such non-coal waste materials in accordance with Local, State and Federal regulations.

UMC 817.101 Backfilling and Grading: General Requirements - JRH

Specific plans for backfilling and grading are required in the plan under this section. Additionally sufficient information must be provided to the Division regarding earthwork mass balances to determine reclamation costs for bonding purposes. The Operator shall include in the resubmittal of the MRP, all current forms and contours accomplished on the site as a result of exploration activities and that work which is planned in conjunction with the MRP and the resulting reclamation earthwork which will be required to comply with backfilling and regrading requirements of this section. Sufficient details including maps, plans, cross sections, mass balance and other calculation should be provided in the plan to determine adequacy of the design for reclamation.

UMC 187.103 Backfilling and Grading: Covering Coal and Acid- and Toxic-Forming Materials - JRH

Coal analysis found currently in the MRP accounts only for the metallurgical quality of the coal and does not include the parameters required to determine whether the materials left of the site will be acid- or toxic- forming. Please refer to the soils guidelines regarding the appropriate analyses required. Additional calculations and treatments may be necessary if the analysis shows the material to be either acid- or toxic-forming would also have to be provided.

UMC 817.106 Regrading and Stabilization of Rills and Gullies - JSL

The operator must commit to fill (with topsoil), regrade, and seed all rills and gullies before they degrade to a depth of nine inches.

Determination of Adequacy

This section has not been addressed.

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