



State of Utah

DEPARTMENT OF NATURAL RESOURCES
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January 19, 1990

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

Dear Mr. Guy:

Re: Technical Deficiency Items, Five-Year Permit Renewal Application,
Beaver Creek Coal Company, Trail Mountain #9 Mine, ACT/015/009,
Folder #2, Emery County, Utah

Enclosed is the Technical Deficiency document for the Trail Mountain #9 Mine. The reclamation plan needs to be reorganized into a cohesive section and all of the necessary details included.

Please address these items by January 31, 1990. The technical analysis written by our office must be completed by February 15, 1990.

Sincerely,

A handwritten signature in cursive script that reads "Pamela Grubaugh-Littig".

Pamela Grubaugh-Littig
Permit Supervisor

djh
Enclosure
AT45/130

**TECHNICAL DEFICIENCIES
TRAIL MOUNTAIN #9 MINE
ACT/015/009**

**Beaver Creek Coal Company
Emery County, Utah
January 19, 1990**

UMC 800 Bonding-(PGL)

The reclamation bond estimate must be updated to incorporate all changes to be consistent with the reclamation plan.

UMC 817.11 Signs and Markers-(PGL)

The applicant must state the duration of time that signs will be maintained at the Trail Mountain #9 Mine for inclusion in the PAP (page 3-22).

UMC 817.21 Topsoil: General Requirements-(HS)

The final reclamation plan is partially contingent upon the conclusions drawn from data obtained from the revegetation test plots (i.e., introduced vs. native seed mixtures). Additionally, the test plots were designed to demonstrate the suitability of existing fill material (proposed substitute topsoil) as a plant growth medium for final reclamation.

The applicant's plan to regrade, topsoil, revegetate, and provide erosion control, etc., is inadequate and contradictory. Reclamation commitments within the PAP (Chapters III and VIII) do not reflect commitments and reclamation procedures elucidated in Appendix 9-1 (Mt. Nebo Scientific Research and Consulting). Although conclusions regarding reclamation feasibility and site specific revegetation techniques are partially dependent upon the results from the revegetation test plots, general reclamation procedures should be predictable at this time. Therefore, the operator must submit for Division review, a revised version of the reclamation plan which reflects preliminary test plot results, original reclamation plan (i.e., Mt. Nebo Scientific Research and Consulting), Division memo (i.e., Dan Duce, Reclamation Soils Specialist, dated February 24, 1988), existing PAP text, and etc.

The applicant states "if future disturbance uncovers or encounters salvagable soil, Beaver Creek Coal Company will remove, stockpile, and stabilize soil (pages 3-52 and 3-57)." This statement must include verbage which commits to analyzing said materials prior to removal (UMC 817.21[a]) and in accordance with Division Guidelines for Management of Topsoil and Overburden, Table 1.

UMC 817.22 Topsoil: Removal-(HS)

Revegetation test plot data indicates relatively successful revegetation. Continued monitoring (i.e., fifth year, ninth year, and tenth year) of the plots may reveal vegetation sustainability and reference area compatibility. As a reminder, the applicant is required to submit test plot vegetation surveys conducted in the summer of 1989. These results must be submitted in the Annual Report (April 1990).

Review of the soils data collected in 1987 indicate the following:

1. Surficial salt activity (Electrical Conductivity-E.C.) is lower than salt activity in the lower profile.
2. Field inspections of the test plot soil and the existing fill material indicates lower bulk density within the test plot soils.
3. A soil moisture deficit exists during the majority of the growing season (i.e., high evapotranspiration potential: low effective precipitation).

Preliminary Conclusions: Salt is being leached down through the profile or salt activity in the lower profile has not had adequate time to migrate up through the profile. Since both hypotheses are feasible, continued analyses of the salt activity (E.C.) at various depths within the profile is required.

Hence, E.C. must be analyzed at various depths throughout the test plot soil profile in the spring (late May/early June) and fall (mid-Septembere) of 1994.

UMC 817.24 Topsoil: Redistribution-(HS)

(Refer to comments under UMC 817.21 Topsoil: General Requirements).

The applicant must state the manner in which the stockpiled topsoil will be redistributed (i.e., veneer the surface of regraded soils/spoils, redistribute upon areas where the material was derived, etc.).

The applicant states (page 8-10, Section 3.5.4.1 and page 3-57) "Upon abandonment the postmining land use will not require extensive backfilling and grading." Accordingly, many areas which remain unaltered by backfilling and grading operations as well as those areas which incur intense machinery traffic will be highly compacted. The applicant must commit to deep ripping regraded spoil/soils and disking topsoil if surface compaction is high. Please specify the approximate depth of deep ripping and disking.

UMC 817.25 Topsoil: Nutrients and Amendments-(HS)

The applicant must state how the need for fertilizer and/or soil amendments will be determined (i.e., sampling program, constituent to be analyzed).

UMC 817.41 Hydrologic Balance: General Requirements-(TM)

The applicant needs to update the water quality plans and data submitted in the PAP into a cohesive updated section, providing a data summary or reference to an annual report. This section must provide a table listing all water monitoring sites and monitoring frequencies.

The elimination of data sheets and figures other than updated materials is necessary to condense the PAP. Figure 7-9 needs to be updated to reflect current references to appendices in the PAP and show all monitoring locations including 26-4P.

UMC 817.42 Hydrologic Balance: Water Quality Standards and Effluent Limitations-(TM)

The applicant has not provided enough detail regarding site plans for erosion and sediment control methodologies that will be employed during active mining and reclamation. The applicant must provide a site plan which will provide the necessary details to show what Best Technology Currently Available (BTCA) will be used to treat all affected areas, both during active operations and mining.

Tables in the PAP must summarize the areas to be treated by BTCA for both the current operations and reclamation of the site. The information in the table will delineate drainage area size and treatment methodology for all permitted areas which will not report directly to a sediment pond. The table in the PAP will include an area number from a figure or plate which identifies the area and treatment. The term "small area exemption" does not apply unless the area is revegetated and released from bonding requirements.

It is prudent that the applicant consider leaving a sediment pond in place following reclamation, or a modified version of the current pond to alleviate concerns regarding sediment control during reclamation.

The applicant must organize the plan in a manner which allows the reader to refer to calculations referenced by an explanation in the text. References generally were not correct, and as a general comment, the whole reclamation plan is very disorganized, although basic information is available and scattered throughout appendices in the PAP.

The applicant needs to reorganize the reclamation plan into a cohesive section and modify the plan to provide the necessary details.

UMC 817.43 Diversions-(TM)

The applicant must supply information regarding the design capacity of the 66-inch bypass culvert for Cottonwood Creek. Specifically, four additional inlets along the County Road tie into the bypass system. The applicant must show how these drainage areas are considered in the design calculations (inlet above lower gate adjacent to fence, two inlets across from main gate on west side of road, and one inlet just north of the 96-inch culvert inlet).

Drawings must be updated to reflect two additional drainages into the sedimentation pond (a total of three inlets to the pond). A fourth inlet has been identified as the mine water discharge pipe, and also needs to be shown. An additional undisturbed ditch draining into the sediment pond from a small disturbed area identified in the field as draining a 25 foot x 15 foot area needs to be shown on a map and sized in the PAP.

UMC 817.44 Stream Channel Diversions-(TM)

The operator presents reclamation plans for both the main channel of Cottonwood Creek and the side canyon draining into Cottonwood Creek. The calculations and plans for both of these drainages calls for installation of check dams and riprap sized by riprap nomographs. The applicant has presented some questionable designs regarding no riprap placement in the channel bottoms. This design parameter is not acceptable to the Division.

No sediment control for channel reconstruction has been recommended because the applicant considers it not practical. The Division feels that the installation of check dams will provide temporary sediment control until the channel has stabilized following construction. A detailed explanation of how these check dams will be installed is necessary to complete the PAP and an explanation of how they will provide sediment control is required.

UMC 817.48 Hydrologic Balance: Acid- and Toxic-Forming Materials-(HS)

The applicant states in Appendix 9, page 16 through 17B that "during grading, cut and fill operations, unsuitable materials will be buried with four feet of material." The applicant must state how unsuitable material (i.e., Oil and Grease, Selenium, Acid-Forming Potential, etc.) will be identified, and what sampling and laboratory methods will be employed to determine suitability.

The applicant must commit to sample and analyze sediment pond waste material prior to removal. Samples must be analyzed in accordance with the Division's Guidelines for Management of Topsoil and Overburden, Table 6. Please incorporate similar verbiage in appropriate sections of the PAP.

All excess soil, sediment pond waste, etc., temporarily disposed of on the surface, must be bermed and analyzed for its acid- and/or toxic-forming potential if stored on the surface for more than seven calendar days. Please make necessary PAP text changes.

**UMC 817.71 Disposal of Excess Spoil and Underground Development
Waste: General Requirements-(HS)**

References regarding refuse disposal in an approved landfill (page 3-24 and 3-48) are unacceptable (UMC 817.71[a]). All such verbage must be deleted from the PAP.

UMC 817.89 Disposal of Noncoal Wastes-(PGL)

The applicant must update the disposal of noncoal waste at this mine site (page 3-48) for inclusion in the PAP.

UMC 817.113 Revegetation: Timinig-(HS)

Seeding and planting of disturbed areas must be conducted during the first normal period for favorable planting conditions and after final site preparation. Please incorporate such language on page 3-57 of the PAP.

If a land imprinter is utilized, seed must be broadcast immediately before imprinting. Additionally, the land imprinter is most effective when the seedbed is light textured or loose from disking or plowing. The applicant must incorporate such language into the PAP and insure that the land imprinter actually imprints the surface of the soil/spoil as designed.

**UMC 817.114 Revegetation: Mulching and Other Soil Stabilizing
Practices-(HS)**

The applicant indicates that surface erosion control will be provided, utilizing erosion control matting or wood fiber mulch (page 3-51). In Appendix 9-1, page 14 (Mt. Nebo Scientific Research and Consulting Report), the applicant commits to cover the entire reclaimed area with erosion control matting. It should be noted that given the final slope configurations, the proximity to a perennial fishery stream and the high silt and clay fraction within the proposed substitute topsoil, erosion control matting should cover the entire reclaimed site. Additionally, it is imperative that erosion control matting be installed in strict accordance with manufacturer's specifications. Please incorporate this information into the PAP.

djh
AT107/8-12