



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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TO: Daron Haddock, Permit Supervisor

FROM:  Priscilla Burton, Soils Reclamation Specialist

RE: Hardscrabble Submittal. AMAX Coal Co. Castle Gate Mine. ACT/007/004-92A. Carbon County. Utah. Folder #2.

Summary:

A response to Division Order Item #8 was received and approved on 6/3/91. The present submittal regresses from the 6/3/91 plan, as it does not include the testing requirements of Division Order Item #8 after grading of the spoil in Hardscrabble Canyon.

Division Order Item #13 requests deep ripping of the graded spoil material to 18-24 inches. The present plan is not in compliance, as it calls for ripping the soil 4 inches.

Technical Analysis:

Division Order 8)

R614-301-231. General Requirements. The PERMITTEE must include plans for testing of the redistributed soil to evaluate the nutrient and other soil amendment requirements. The Division requests that the Permittee take 1 sample for every 2.5 acres of respread soil and that the following standard fertility tests are performed: texture, nitrate nitrogen (ppm), phosphorus (ppm), potassium (ppm), pH, and EC (mmhos). These tests must be performed on all soil, regardless of origin, at all disturbed areas after grading. This information shall be submitted on or before March 1, 1991.

Proposal:

Page 17 of Volume 3 (Hardscrabble submittal) indicates that soil amendments will be added according to results of tests which were taken in May of 1990.

Analysis:

The soil samples which were taken in May of 1990 served to qualify the spoil as a non-toxic/non-acidic, suitable seedbed and cover material. An assumption is made that the material is uniformly non-toxic/non-acidic throughout the spoil.

After grading, a sampling program of the final graded surface to determine fertilization requirements. Having been previously buried, material which will be on the surface of the graded spoil will have different fertilization requirements than that exposed at the surface prior to grading. One sample for every 2.5 acres of the 30.5 acres is requested (12 samples).

Deficiencies:

Testing of the regraded spoil (1 sample/ 2.5 acres) must be included in the reclamation plan to comply with this section of the Division Order.

Division Order 13

R614-301-340. Reclamation Plan. The PERMITTEE must provide plans to protect reclaimed areas for a minimum 2-year period. The PERMITTEE will revise the MRP to show 1) seedbed preparation plans (i.e. deep ripping to 18-24 inches), 2) that seed and fertilizer will not be mixed in the hydroseeder, 3) plans for the use of the supplemental planting mix for ephemeral/intermittent drainages, including locations (shown on the reclamation maps) and timing of the planting operations, 4) the final revegetation plans (as identified in the July 1990 correspondence) for the cut and fill slopes associated with the Crandall Canyon access road, 5) Clear plans for the reclamation of Gravel Canyon. This information must be provided on or before March 1, 1991.

Proposal:

Page 18 of Volume 3 indicates that scarification to a four inch depth will follow emplacement of borrow material.

Analysis:

There appears to be no plan for scarification of the regraded spoil unless borrow material is brought to the site to cover problem areas which will not revegetate after the initial treatment.

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Scarification or ripping to 18-24 inches could be accomplished at the same time as fertilizer incorporation, if granular fertilizer is used. (Present plans call for hydro-fertilization after seeding.) Deep ripping will leave the seed bed rough, improving water infiltration and sediment control.

Deficiency:

The plan must indicate that ripping or scarification of the regraded spoil will occur to a depth of 18-24 inches prior to the application of borrow soils or hydroseeding.

Conclusion:

The Hardscrabble submittal (Volume 3) of the plan must be revised to accommodate the Division requests of Item #3 (sampling of the regraded spoil for fertility parameters) and Item #8 (deep-ripping of the seed bed to a depth of 18-24 inches) of Division Order 92A.

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