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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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April 27, 1989

TO: Rick Smith, Acting Permit Supervisor

FROM: Henry Sauer, Reclamation Soils Specialist *HS*

RE: Initial Completeness Review, Blue Blaze Coal Mine,
PRO/007/020, Folder #2, Carbon County, Utah

UMC 783.21 Soil Resources Information - (HS)

The applicant must provide an Order III Soil Survey for the entire permit area. This must include a map of proper scale delineating different soils; a soil (pedon) description for each soil identified; and present and potential productivity of each soil identified.

The disturbed area soil survey is incomplete. An Order I Soil Survey is required for the disturbed area. It is unclear as to the method and intensity of the soil survey conducted by Patrick D. Collins for the proposed disturbance. Please identify the level of intensity of the above soil survey and describe the method employed to correlate soils of the mine site with published or unpublished National Cooperative Soil Surveys.

Additionally, the applicant must identify (percentage, pedon description) soil phases and inclusions within particular soil types. Limiting factors within soil types may be the result of phase and inclusion variation. Each and every inclusion and phase within a soil type proposed to be removed must be reported separately and have physical and chemical analyses performed (the Division Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining, Table 1).

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The soil resources information is incomplete with regard to the soil available for plant growth material for final reclamation. There is a discrepancy between the extent of new disturbance depicted on Enclosure 6 and the area identified in Enclosure 19 for topsoil removal and storage. Two omissions noted are the Topsoil Storage Area disturbance and disturbance associated with the proposed plan for burial of development waste along the old haulage road. If soils are unsuitable for reclamation, then the applicant must identify and substantiate that particular areas of soil are unsuitable.

The applicant must correlate the two sets of lab data (PAP Soil Resources Information 817.21 - 817.25, Volume I, Chapter II) by additional soil sampling. Physical and chemical analyses must be performed for all soil removed. Sample sites must be located within the area proposed for topsoil salvage and shown on Enclosure 6. Samples must be identified and collected by depth as follows: 0-15 cm, 15-30 cm, 30-45 cm, and every 30 cm thereafter. Soil sampling must occur to the depth of planned excavation. Laboratory analyses are required and methodologies recommended are those outlined in the Division's Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining, Table 1 and Table 6, respectively.

UMC 783.24 Maps: General Requirements - (HS)

Provide a map(s) identifying all existing areas of spoil, waste, coal development waste, noncoal waste, area of predisturbance, and areas to be retopsoiled and revegetated. The Soils Map (Enclosure 6) identifies the valley bottom adjacent to the old mine ruins (foundations) as mine dumps. This is only partially true. Identify areas where undisturbed soils remain.

Provide a map clearly defining areas of contemporaneous reclamation, waste removal and disposal.

Provide designs, cross sections, dimensions and maximum slope for the proposed topsoil storage area. Enclosure 19 indicates the storage of 8,800 yards³ within the topsoil storage area. The PAP text indicates (Soil Resources Information, UMC 817.21 - 817.25, Volume I, Chapter II) the removal and storage of 10,327.6 yds³. Please clarify this discrepancy.

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Provide an isopach map delineating depth of topsoil removal and redistribution, and the aerial extent of each depth category.

UMC 784.13 Reclamation Plan: General Requirements - (HS)

Provide adequate physical and chemical analyses (constituent outlined in the Division's Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining, Table 6) of coal waste to be buried and cover material used to backfill disposal sites (i.e., down-cast material, excess cut material from road construction). Additionally, provide volume estimates of material to be disposed of, storage capacity of disposal site and volume of cover material.

Provide an adequate timetable for completion of each major step in the reclamation plan, and any contemporaneous reclamation planned (include topsoil stockpile reclamation and development waste disposal site reclamation).

Provide a description of measures employed to insure that all acid-forming and toxic-forming materials are identified and disposed of in accordance with UMC 817.48 and UMC 817.103.

Provide a topsoil mass balance sheet to include: volume of topsoil removed from each area of disturbance and the volume of topsoil redistributed for each area of disturbance.

The following information must be provided to meet the requirements of UMC 817.21 - 817.25.

1. Methods and equipment employed to ensure proper implementation of a soil removal plan:
 - (a) vegetation removal, and
 - (b) method utilized to exact depth of soil removal.

2. Methods and equipment employed to ensure proper implementation of a soil storage plan:
 - (a) erosion protection (berm, mulch, contour-furrowing, seed mixture, etc.).
 - (b) compaction mitigation, and
 - (c) fertilizer/amendments to ensure revegetation success.

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3. Methods and equipment employed to ensure proper implementation of a soil redistribution plan:
 - (a) compaction mitigation,
 - (b) soil scarification (i.e., depth, machinery),
 - (c) method used to ensure proper topsoil redistribution depth,
 - (d) fertilizer assessment sampling plan,
 - (e) management to prevent erosion between topsoil redistribution and reseeding,
 - (f) time between regrading and retopsoiling, and
 - (g) seedbed preparation.

Additional information may be required subsequent to initial review of above requested information.

djh
AT23/56-59