

0018



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

March 30, 1995

TO: File

TO: Daron Haddock, Permit Supervisor

FROM: Henry Sauer, Senior Reclamation Soils Specialist *HS*

RE: Reclamation Technical Analysis, Mountain Coal Company, Gordon Creek #2, #7 & #8 Mines, ACT/007/016, Folder #2, Carbon County, Utah

#2

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-232, -301-233, -301-234, -301-242, -301-243.

Minimum Regulatory Requirements:

Selected overburden materials may be substituted for, or used as a supplement to, topsoil if the operator demonstrates to the Division that the resulting soil medium is equal to, or more suitable for sustaining vegetation than, the existing topsoil, and the resulting soil medium is the best available in the permit area to support revegetation.

Analysis:

Pre-law (i.e. P.L.95-87) disturbance at the Gordon Creek Mine is approximately 10.82 acres and covers the No.2 Mine operation yard and access road (approximately 9.18 acres) and what is commonly referred to as the "Old Fan Portal" (approximately 1.64 acres). Topsoil was not separately salvaged from these pre-law disturbed areas.

The permittee plans on utilizing in-place material within the No. 2 Mine Yard Fill and the No.2 Mine access road fill as substitute topsoil (Page 3-14). Laboratory analyses characterizing the proposed substitute topsoil material may be located in Appendix 8-1.



The permittee proposes that soil/spoil on slopes greater than 70 per cent (areas depicted on Plate 3-7) will be left in place and used as substitute topsoil (page 3-17). As a means of demonstrating the suitability of the proposed substitute topsoil material the surface material in these areas will be sampled in May/June (sample site locations depicted on Plate 3-1) and analyzed as described in Section 3.5.5.1.

The "Old Fan Portal" was reclaimed (interim reclamation) in 1984. Existing fill was used as topsoil since no topsoil had been salvaged. Vegetation has been established on the regraded spoils. The permittee proposes additional regrading in the Old Fan Portal area. The permittee has not addressed this section of the regulations in regard to the Old Fan Portal and the disturbance associated with the proposed sedimentation ponds.

Findings:

The permittee has adequately addressed this section of the regulations in regard to the No.2 Mine and access road.

The laboratory results representing the proposed substitute topsoil materials in areas with slopes greater than 70 per cent must be submitted to the Division for review at the earliest possible date.

The permittee has not adequately addressed this section of the regulations in regard to the Old Fan Portal Area and the disturbance associated with the proposed sedimentation ponds and must do so prior to approval of the reclamation plan.

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-232, -301-233, -301-234, -301-242, -301-243.

Minimum Regulatory Requirements:

Redistribution.

Topsoil materials shall be redistributed in a manner that: achieves an approximately uniform, stable thickness consistent with the approved postmining land use, contours, and surface-water drainage systems; prevents excess compaction of the materials: and, protects the materials from wind and water erosion before and after seeding and planting.

Before redistribution of the material, the regarded land shall be treated if necessary to reduce potential slippage of the redistribution material and to promote root penetration. If no

harm will be caused to the redistributed material and reestablished vegetation, such treatment may be conducted after such material is replaced.

The Division may choose not to require the redistribution of topsoil or topsoil substitutes on the approved postmining embankments of permanent impoundments or of roads if it determines that placement of topsoil or topsoil substitutes on such embankments is inconsistent with the requirement to use the best technology currently available to prevent sedimentation, and, such embankments will be otherwise stabilized.

Nutrients and soil amendments shall be applied to the initially redistributed material when necessary to establish the vegetative cover.

The Division may require that the B horizon, C horizon, or other underlying strata, or portions thereof, removed and segregated, stockpiled, be redistributed as subsoil in accordance with the requirements of the above if it finds that such subsoil layers are necessary to comply with the revegetation requirements.

Analysis:

Topsoil and subsoil from the No.7 Mine area was salvaged from all disturbed areas except those areas which because of terrain posed a safety hazard or where topsoil was of limited depth or excessively rocky. Topsoil from the No. 7 Mine (3684 cubic yards) is stored adjacent to the No. 2 Mine operations area. Subsoil from the No. 7 Mine (8000 cubic yards) is stored adjacent to the No. 7 Mine operational area and along with topsoil removed from the No. 7 Mine will be as evenly distributed along the contour (page 3-43) to a depth of twelve inches subsequent to backfilling and grading (Table 8-5A).

Topsoil was salvaged from the disturbance associated with the No. 8 Mine (2514 cubic yards) and is stored on top of the subsoil pile adjacent to the No.7 Mine operational area. Subsequent to the completion of backfilling and grading the topsoil material will be evenly distributed along the contour to a depth of twelve inches (Table 8-5A).

To alleviate compaction all regraded soil will be deep ripped to a depth of 18-inches (page 3-33 & 47).

Fertilizer recommendation will be formulated based on analysis conducted on the topsoil and subsoil stockpiles prior to reexcavation (page 3-50). Topsoil and subsoil stockpiles will be analyzed for nitrogen, phosphorus and potassium.

The permittee has committed to sample the regraded surface of the No.2 Mine to determine fertilizer requirements (page 3-15). However the plan does not discuss the sampling program in

sufficient detail. Field sampling methodology (i.e. sample depth and frequency) and laboratory analyses (parameters) must be described.

Plant growth medium will be roughened to maximize surface roughness. This will be accomplished by using a large backhoe bucket to create 2'-3' diameter irregularly placed depressions (page 8-32).

Findings:

According to the information presented in the permit application the applicant has demonstrated that the minimum regulatory requirements of this section will be met.

HYDROLOGIC INFORMATION

Hydrologic reclamation plan.

The application shall include a plan, with maps and descriptions, indicating how the relevant regulatory requirements will be met. The plan shall be specific to the local hydrologic conditions. It shall contain the steps to be taken during mining and reclamation through bond release to minimize disturbance to the hydrologic balance within the permit and adjacent areas; to prevent material damage outside the permit area; and to meet applicable Federal and State water quality laws and regulations. The plan shall include the measures to be taken to: avoid acid or toxic drainage; prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow; provide water treatment facilities when needed; and control drainage. The plan shall specifically address any potential adverse hydrologic consequences identified in the PHC determination and shall include preventive and remedial measures.

Analysis:

Acid and toxic-forming materials.

The permittee commits to the removal and relocation of contaminated material from the No. 2/7 & 8 Mine yard fills. This would include removal of material contaminated with oil and grease, materials contaminated with greater than 50 per cent coal, and acid and toxic-forming material as defined by the Utah Coal Mining Regulations and qualified by the Division's Guidelines for Topsoil and Overburden, Table 2. Based on visual observation, combustibility analysis and sampling outline on pages 3-50 & 3-51, these contaminants will be identified during backfilling and grading activities, completely removed from their original location and eventually buried on site with four feet of non-combustible, non-acid and non-toxic forming material.

Exposed coal seams will be covered with a minimum of four feet of noncombustible material. Rider seams may not be covered in areas where fill stability considerations are imposed (See Backfilling and Grading and Approximate Original Contour Sections of the Technical Analysis). The coal seams will be covered with three feet of "rock material" and one foot of topsoil and/or suitable substitute topsoil (page 3-34).

Findings:

The laboratory results representing potentially acid and/or toxic-forming materials must be submitted to the Division for review at the earliest possible date.

REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Minimum Regulatory Requirements:

Revegetation: General requirements.

Revegetation: Mulching and other soil stabilizing practices.

Suitable mulch and other soil stabilizing practices shall be used on all areas that have been regraded and covered by topsoil or topsoil substitutes. The Division may waive this requirement if seasonal, soil, or slope factors result in a condition where mulch and other soil stabilizing practices are not necessary to control erosion and to promptly establish an effective vegetative cover.

Analysis:

Mulching and other soil stabilizing practices.

On slope greater than or equal to 2h:1v where topsoil and/or subsoil is applied erosion control blanket will be installed. On slopes less than 2h:1v, where topsoil and/or subsoil is redistributed, 2000 lbs./acre of wood fiber mulch will be applied (3-56).

On slope greater than 70 per cent, where topsoil and/or subsoil is not redistributed, 1500 lbs./acres alfalfa mulch will be placed on the surface. In areas which can be reached by a trackhoe surface gouging will be performed to create surface roughness and incorporate mulch. In steep areas which can not be reached by a backhoe, hand tool will be used to roughen the soil surface and incorporate the mulch.

Findings:

According to the information presented in the permit application the applicant has demonstrated that the minimum regulatory requirements of this section will be met.

SPECIAL CONDITIONS OR STIPULATIONS TO THE PERMIT APPROVAL

The laboratory results representing the proposed substitute topsoil materials in areas with slopes greater than 70 per cent must be submitted to the Division for review at the earliest

possible date.

The laboratory results representing potentially acid and/or toxic-forming materials must be submitted to the Division for review at the earliest possible date.

The permittee has not adequately addressed section R645-301-233 of the regulations in regard to the Old Fan Portal Area and the disturbance associated with the proposed sedimentation ponds.

CC:Susan White
Jesse Kelley
H:GC278TAR