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State of Utah
DEPARTMENT OF NATURAL RESOURCES
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October 16, 1998

To: File

Thru: Joe Helfrich, Permit Supervisor

Thru: Daron Haddock, Permit Supervisor

From: Priscilla Burton, Soils Reclamation Specialist

ORZ for Joe
ORZ
PWB

RE: Expanded Topsoil Storage Area, Canyon Fuel Company, LLC, Soldier Canyon Mine, ACT/007/018-98C, File #2, Carbon County, Utah

SUMMARY:

Canyon Fuel Co. proposes to enlarge the topsoil storage pad at the mouth of Soldier Canyon by an additional 2.54 acres. The additional area has the capacity for storage of 32,000 CY of topsoil from the Dugout Mine. The location is immediately adjacent to the southern boundary of the present site. A culvert will be placed in the irrigation ditch and passage between the two sites will occur over the culvert so as no to disturb the irrigation ditch. Current and postmining land use is grazing. Approximately 3,000 CY of topsoil will be salvaged from the site and stored in berms around the perimeter. This submittal is recommended for approval.

ENVIRONMENTAL RESOURCE INFORMATION

PERMIT AREA

Regulatory Requirements: 30 CFR Sec. 783.12; R645-301-521.

Analysis:

The land to be utilized for topsoil storage are in the NW1/4 NW1/4 SE1/4 of Section 25 T13 S R11E, it is approximately 2.54 acres. The land is owned by Soldier Canyon and leased for grazing.

Findings:

The information provided is adequate for the purposes of this regulation.

SOILS RESOURCE INFORMATION

The information provided is adequate for the purposes of this regulation.

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.21, 817.200(c); R645-301-411, -301-220.

Analysis:

Information concerning the expanded topsoil storage site is found in Appendix 2-F of the Soldier Canyon MRP. A soil survey was conducted by Chris Hansen of Canyon Fuels Co. Three pits were dug with a back hoe to the depth of 4 to 5 feet. All the pits were located in the north end of the proposed disturbance.

Soil logs and Plate 2-1 show that the soils are on a gentle slope at an elevation of 6,190 feet. The soil type was identified as Haverdad loam, classified as fine-loamy, mixed, mesic Ustollic Torrifuvents. As with the Hernandez loam, this soil has productive potential if irrigation is present. The soil was previously disturbed by farming, although some profile development has recurred.

The profile (site SCSP-3) begins with a two inch A_p horizon of clayey loam is underlain by a three inch clayey loam B_k horizon. The next layer is the C_k1 from 5 to 26 inches. This is a silty clayey loam. The C horizon is further divided in to C_k2 (24-42 inches) and C_k3 (42-62 inches). The C divisions are based upon color change and the presence of silt in the upper layer and increasing cobbles in the lower layer. The soil was damp in the C_k2 layer. Proximity to the irrigation ditch may account for this dampness or it may be a result of an impervious soil structure resulting from the saline-sodic nature of the soil. The pH of this soil in the C_k1 and C_k2 horizons was 8.5 and 8.8. The reported SAR's for these horizons were 3.77 and 5.48. The SAR rises to 10.2 and the pH is 8.5 in the C_k3 horizon.

The profile of SCSP-3 represents the western 0.53 acres of this site and should produce 855 CY of topsoil for salvage. The other two pits present the image of the remaining 1.99 acres and should produce approximately 2,140 CY of topsoil.

Soil samples were evaluated by Intermountain Labs. Other sample locations SCSP-1 and SCSP-2 did not exhibit salinity or sodicity in the profile. The pH ranges for these sites were 7.6 to 7.9 in the upper horizons and 8.0 to 8.3 in the C horizons.

Findings:

The information presented is adequate for the purposes of this regulation.

PRIME FARMLAND

Regulatory Reference: 30 CFR Sec. 785.16, 823; R645-301-221, -302-270.

Analysis:

Soils in the location of the site are in the map unit 53, Hernandez family, moist, 1 to 6 percent slopes. This map unit is listed as capability class IIIe-2 when irrigated. Although a letter from the State Soil Scientist in Feb. 1991 states that in general the lands in the W1/2 of the SE1/4 of Section 25, T13S, R11E are not prime farmland, after site investigation, this land was determined to be prime farmland if a developed source of irrigation water is available (see attached letter to Robert Davidson dated 3/27/97).

Presently, the land is owned by Soldier Canyon Mine and leased for grazing. Postmining land use of the land is grazing. Water flowing in the ditch is owned by Soldier Canyon Mine and is being diverting for a downstream use at Anderson Reservoir. Since the land is not presently being utilized for cropland and is not anticipated to be used as cropland, the land is not prime farmland.

Findings:

The information supplied is adequate for the purposes of this regulation.

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

An average of eight inches of soil will be removed and salvaged from the 1.99 acres of Hernandez soils, yielding approximately 2,140 CY of soil. The volume of Haverdad soil to be salvaged is estimated to be 855 CY from 0.53 acres. The total volume of salvaged topsoil will be 2,995 CY. A soils specialist will be on site to supervise the removal of topsoil.

Soils from the Dugout site will be placed in one rectangular shaped pile with 2:1 side slopes. The volume of the material to be imported to the site is estimated in section 231.400, section 232.100 and Appendix 2-6 of the Dugout Mine Plan. The capacity of the site is approximately 32,000 CY.

The seed mix to be seeded on the site is itemized on page 3-35 of the Dugout Mine Plan. The seed mix includes Indian ricegrass; Western, Slender, and Thickspike wheatgrasses; and a non-native

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Alfalfa. Section 234.200 of the Dugout Mine Plan describes efforts that will be taken to minimize contamination of the topsoil with cheatgrass seed from the existing Soldier Canyon topsoil piles.

Findings:

The information provided was adequate for the purposes of this regulation.

RECLAMATION PLAN TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

The reclamation of the site will follow approved procedures described in Section 2.40 of the Soldier Canyon Mine MRP. After the stored topsoil is removed. The land will be treated to relieve compaction and then the stored topsoil will be redistributed.

Findings:

The information provided is adequate for the purposes of this regulation.

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