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

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Michael O. Leavitt
Governor
Lowell P. Braxton
Division Director

August 31, 1998

To: File

Thru: Joe Helfrich, Permit Supervisor

From: Priscilla Burton, Soils Reclamation Specialist

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 storage pad utilized for storing topsoil at the mouth of Soldier Canyon. 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 not to disturb the irrigation ditch. The soil has the potential to be productive, prime farmland, therefore, Canyon Fuel Co. must provide information on irrigation rights to this parcel.

This submittal does not indicate the number of additional acres to be included in the Soldier Canyon disturbed area in the narrative or on a Plate. Nor does it indicate land-ownership of the parcel. An Order One soils map was not submitted with the proposal. Appendix 2-F Sections 8 (Bonding) and Section 9 (Prime Farmland) could not be found within the submittal. These items must be supplied before 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. The land is approximately 500 feet in length by 250 feet in width. Thus, it is approximately 2.87 acres. The surveyed dimensions of the land were not stated in the narrative or on an exhibit. Ownership of the land was not disclosed.

Findings:

In accordance with **R645-301-521** the permittee must state the ownership and surveyed dimensions of the land to be disturbed.

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 may most adequately represent the margins of this site as it grades into the ravine to the west. The other two pits may present the image of larger site: they have up to 12 inches of combined A and B horizons and are most probably members of the Hernandez loam (similar to the OTP1 pit excavated on the original Soldier Canyon topsoil storage area to the north). OTP1 soils were classified as Hernandez loam. The Order One soils survey map should delineate the extent of each of these types of soils.

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:

Salvage of the topsoil resource can not be calculated based on the SCPS-3 profile as it differs greatly from SCPS-1. In accordance with **R645-301-222** the permittee will clearly outline the extent of each type of soil within the area to be disturbed on an Order One soils map.

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). Immediately north of the site of the site is an irrigation ditch which has flowing water. To determine whether the site has adequate irrigation water, the Division and the NRCS must know who own the water rights in the ditch.

Canyon Fuels must disclose whether they are present owners of the irrigation rights associated with the ditch and whether they are the owners of the property to be disturbed.

Findings:

The information supplied is not adequate for the purposes of this regulation. In accordance with **R645-301-221**

Water rights and property ownership associated with the land located in the NW1/4 NW1/4 SE1/4 of Section 25, T13S, R11E must be identified within the application.

OPERATION PLAN

TOPSOIL AND SUBSOIL

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

Analysis:

Six inches of the topsoil will be removed from the surface of the storage location and stored in berms around the site. Volume of soil to be stored in this manner was not indicated. Area of total disturbance was not indicated. Assuming 3 acres are disturbed, 2,300 CY of soil will be stored in this manner.

Prime Farmland regulations would require that 48 inches of soil be removed prior to disturbance. However, the Division would allow six to twelve inches of topsoil salvage from the site considering the use of the site is only for storage of additional topsoil. The Division feels that the compaction and sterility caused by storage of soil upon the site is similar to that which would occur if the C horizon were salvaged and stored. The compaction can be alleviated with ripping during final reclamation. Therefore, with the concurrence of the NRCS, the Division will approve of salvage and storage of the A and B horizons only. This may vary from 6 to 12 inches depending upon location within the parcel. Soil pit SCSP-1 had 12 inches of A& B horizon, whereas pit SCSP-3 had 6 inches. A soil salvage map should be developed which identifies stripping depths at the site.

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 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 not adequate for the purposes of calculating topsoil salvage volumes. In accordance with

R645-301-232.100 the depth of soil to be salvage must be indicated by soil type on an Order One soils map to allow calculation of the approximate volume of topsoil to be salvaged from the site.

RECLAMATION PLAN TOPSOIL AND SUBSOIL

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

Analysis:

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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.

cc: Robert Davidson
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UNITED STATES
DEPARTMENT OF
AGRICULTURE

NATURAL RESOURCES
CONSERVATION
SERVICE

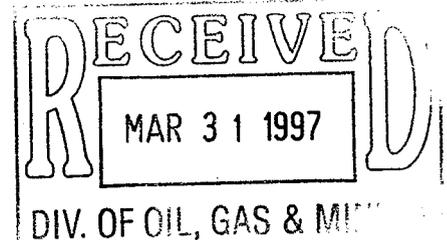
PRICE FIELD OFFICE
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PRICE, UTAH 84501

DATE: MAR 27 1997

FILE CODE: 290-11-11-5

SUBJECT: PRIME FARMLAND DETERMINATIONS

TO: Robert A. Davidson
Soils Reclamation Specialist



RE: Waste Rock Storage Site, Soldier Creek Coal Co. Soldier Creek
Mine ACT/007/018-96A

After site investigation, the Natural Resources Conservation Service has determined that potential prime farmland or farmland of statewide importance occurs within Sections 25 and 36. Mapping units 48 and 53 are both potentially prime farmland soils but these soils must have adequate irrigation water and a developed irrigation system. The irrigated farm field in Sec. 36 is definitely prime farmland. The area to the north has been irrigated in the past but is not being irrigated now and may not have adequate irrigation water. The other areas are not prime farmland for the following reason:

1. No developed irrigation system on arid soils.

A handwritten signature in cursive script that reads "Leland Sasser".

Leland Sasser
Soil Scientist

cc: William Broderson, State Soil Scientist, NRCS