

0005



Norman H. Bangertter

Governor

Dee C. Hansen

Executive Director

Dianne R. Nielson, Ph.D.

Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

ACT 041/002

Folder #2

March 7, 1991

TO: Daron Haddock, Permit Supervisor

FROM: Priscilla Burton, Reclamation Soils Specialist *FB*

RE: Amendment, New Substation Pad, SUFCO, Convulsion Canyon Mine, ACT/041/002-90F, Folder #2, Sevier County, Utah

Summary:

Southern Utah Fuel Co. (SUFCO) proposes to build a new substation pad on the slope, southwest of the existing parking lot. The amendment was received 11/9/90. A response to technical deficiency was received on the 2/19/91. This memo summarizes the soils and revegetation aspects of the proposed activity. The information was gained from the above two submittals and a conversation with Wesley K. Sorensen on 3/7/91.

Analysis:

SOIL DESCRIPTION

The soils in the area of the new substation pad are type W as identified on Map B, Lease Area Soils Map, see Vol 5 of the Mining and Reclamation Plan (MRP). Soil type W is classified as a loamy, skeletal, mixed, frigid Typic Xerorthent. The slope is 60% or more, elevation is 7500 - 7550 feet, the predominant vegetation is pinyon/juniper. (The soil is further described in the MRP beginning on pgs 31 & 98, volume 5.) Table 56, p 98 of the MRP, provides a representative analysis of the soil. Where soil exists, the A horizon is 0-4" deep. Gravel and cobbles make up 80% of the A horizon by volume. The organic matter is 1.54%, the pH = 7.5. Of the cations reported, the concentrations are Ca > Mg > Na. The A horizon is a sandy clay loam. No B horizon exists.

VEGETATION & TOPSOIL HANDLING

The proposed substation will be located on top of a sandstone ledge. Localized areas of soil and vegetation exist on the slope. An area approximately 100' X 130' will be cleared of trees, yielding approximately 15 cords of wood. This wood will be disposed of by the contractor and a small portion of it may be placed around and on the topsoil stockpile as wind and water

Page 2
ACT/041/002
March 7, 1991

erosion protection. Shrubs and other plant material will be removed in one operation along with the topsoil. They will be allowed to compost in the topsoil pile.

Supposing a 4" depth of topsoil over the entire area yields 3900 cu ft of topsoil.

(100' x 130' x 0.3' = 3900'), (3900' x 1/27cu ft/cuyd = 144 cu yds)

This is a maximum of 144 cu yds that will be stored on the stock trail adjacent to the pad, see Map 83-2. (Mr. Sorensen's best guess is approximately 20 - 30 cu yds. He agreed to take all material available, because of the scarcity of topsoil for the minesite.)

The stock trail is the only flat portion of the hillside. The soil will be stored in one pile. It will be handled and revegetated as described in sec 3.2.4 , volume 9 of the MRP, "Topsoil Handling." Berms and silt fences and downed trees will be used to control sediment. Seed will be sown immediately on the roughened surface of the pile to take advantage of spring rains for the establishment of interim revegetation. SUFCO will notify the Division of the date of seeding, one week prior to seeding.

OTHER CONSIDERATIONS

Power will be brought to the proposed substation using raptor-proof power pole designs as per R614-301-333.300.

The additional disturbance created at the mine site will require dredging the sediment pond and increasing the capacity of the pond slightly. The sludge removed from the pond must be compositely sampled for acid/toxic materials. The sample will be analyzed according to Table 6 of the Utah Guidelines for Soil Management. Results will be submitted to the Division. If the sludge is non-toxic it will be disposed of according to the regulations for excess spoil R614-301-745 and R614-301-542.720. If the sludge is toxic, it will be disposed of according to the regulations for acid/toxic materials R614-301-731.300 and R614-301-553.252.

FINAL RECLAMATION OF THE PROPOSED SUBSTATION PAD

The MRP volume 5 indicates that slopes of 1.5h:1v (66% slope) will not receive topsoil during final reclamation in the mine area. The proposed substation pad is in a slope of 1.8h:1v (60% slope), slightly less than the 66% slopes that will not be topsoiled. The topsoil will be replaced on the pad area and

Page 3
ACT\041\002
March 7, 1991

stabilized prior to reclaiming as per pgs 35a through 37 of the MRP, Vol 5. Methods described on these pages include scarification and/or construction of small terraces on the slopes, fertilizing, hydromulching, placement of secured hemp matting, and supplemental irrigation as needed, until plants are well established.

The area adjacent to the stock trail that is disturbed as a result of topsoil storage will also be reclaimed by scarifying, fertilizing, seeding, and planting shrubs as in vol 5 of the MRP.

FINAL RECLAMATION OF THE SUBSOIL PILE AT THE WASTE-ROCK SITE

SUFCO estimates that 11,600 cu yds of backfill will be needed for the project. Of this amount, 4.500 cu yds will be retrieved from the subsoil pile located at the waste-rock site. This will use the entire pile. When the proposed substation is removed during final reclamation, the subsoil will be used as backfill at the mine site.

At the waste-rock site, SUFCO will erect silt fences around the disturbance created by the loading of the subsoil. This is an interim sediment control measure. Early in the fall of 1991, SUFCO will spread out the topsoil that had previously been removed from the subsoil storage location as per section. The soil will be handled as described as in sec 4.5 of Vol 9. i.e., The soil will be spread in a roughened surface; a composite sample will be taken and analyzed for Nitrogen, Phosphorus, and Potassium. Fertilization rates will be based on the results of this sample. The fertilizer will be drilled one inch below the seed.

SUFCO will follow the plans for seeding the final reclamation mix on this subsoil site as described in section 4.6, vol 9. The site will be scarified, seeded and mulched in the Fall of 91. SUFCO must submit a reclamation chronology table to the Division regarding this site. The Division must be notified of the seeding date, one week prior to seeding. Seed tags from the seeding must be available to the Division's inspectors.

Success of revegetation will be monitored as described in section 4.6.3 of Vol 9, using the baseline data method (see Appendix IV, Vol 9, "Vegetation and Soils of the Proposed Waste Rock Disposal Site..." 10/83). Evaluations will occur on or about the first week of July each year following the outline in Table 4.6.3-1 of Vol 9 of the MRP.

Page 4
ACT\041\002
March 7, 1981

Recommendations:

Approval of the proposed substation is recommended with the following conditions:

1. Information provided in this technical analysis must be incorporated into the amendment and the Mining and Reclamation Plan.

2. The operator will be bound by the operational procedures described in this document.