



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

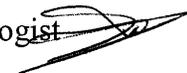
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OK

December 13, 2002

TO: Internal File

THUR: Dave Darby, Team Lead/ Reclamation Hydrologist 

FROM:  Priscilla Burton, Soils Reclamation Specialist, III

RE: Link Canyon, Canyon Fuel Company, LLC., SUFCO Mine, C/041/002-AM02E-2

SUMMARY:

The Link Canyon submittal was received on April 8, 2002. Revisions to the plan were received on August 12, 2002 and November 26, 2002.

The proposal is to develop an access road and portal pad in Link Canyon for the purpose of an air intake and emergency escape-way. The disturbed area boundary would encompass 0.23 acres, although the actual disturbance is planned for only 0.14 acres, of which 0.05 acres are riparian in nature due to mine water discharge from the pre-SMCRA portals. The site is previously disturbed. The locations of pre-SMCRA disturbance have been outlined on a map.

The application describes topsoil salvage from zero to six inches depth. Approximately 80 cu yds of topsoil is to be salvaged from the site. The Permittee, U.S. Forest Service and the Division have agreed upon a location for topsoil storage.

The Permittee has made special provisions for rapid establishment of vegetation on the topsoil pile, by utilizing the existing vegetation (*Mahonia repens*) as transplants. The topsoil analysis shows soil that is uniquely fertile for the area.

This memo covers only deficiencies outlined in the technical memo dated October 23, 2002. Further information on environmental resources can be found in the previous reviews of AM02E dated July 17, 2002 and October 3, 2002.

TECHNICAL MEMO

TECHNICAL ANALYSIS:

GENERAL CONTENTS

MAPS AND PLANS

Regulatory Reference: 30 CFR 777.14; R645-301-140.

Analysis:

The application makes reference to previously disturbed areas in Section 2.3.1, page 2-11 and in Section 3.2.2.2, page 3-22. The Permittee indicates that these areas are shown on Plate 5-2F. The previously disturbed area is clearly outlined on this plate.

Findings:

The information provided meets the minimum Maps and Plans requirement of the Regulations.

OPERATION PLAN

TOPSOIL AND SUBSOIL

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

Analysis:

Removal and Storage

Regulation 645-301-232.100 requires topsoil removal from all disturbed areas. The disturbed area boundary encompasses 0.23 acres. The boundary has been drawn wider than the expected area of disturbance. Topsoil will be removed along the portal access road and at the portal pad, approximately 0.14 acres of new disturbance, but not from beneath the proposed power distribution structures. Therefore, there will be 0.09 acres of undisturbed ground within the disturbed area. Should the area of disturbance expand to the disturbed area boundary and encompass the additional 0.09 acres, topsoil must be removed from those 0.09 acres prior to disturbance.

Soils will be removed from all disturbed areas with the exception of the power pole disturbance and from undisturbed islands within the disturbed area. The area of topsoil removal will be flagged, according to the cover letter attached with this submittal (dated August 6, 2002).

The Permittee will have a qualified person on site during construction and reclamation phases (Section 2.3.1.1, page 2-13). Soil types and estimations of salvage depth and area are related in a table in Section 2.3.1.1, page 2-13. In this table, the area of salvage sums to 0.1 acre and the recovery depth of six inches will be used on the riparian areas (RP), the Calcic Haplustepts (CU), and the Typic Haplustepts, light colored (TUL). Less soil recovery is expected in the Typic Haplustepts eroded, carbonatic (TUE) soils. The Permittee has noted on page 2-20 Section 2.3.2.3 of the MRP that all soil will be salvaged to a depth of six inches where the topsoil is less than six inches in depth.

Soil handling will be done at a moisture level of at least 15% (page 2-14, Section 2.3.1.1). A tracked vehicle will be used for topsoil removal (page 2-13, Section 2.3.1.1). A rubber tired vehicle may be used after the topsoil is salvaged.

The plan indicates in Section 2.3.1.1 page 2-11 that topsoil will be carefully separated from the subsoil since most of the subsoils are not suitable as substitute topsoil or growth media, due to high carbonates in the subsoils.

Approximately 80 yards of topsoil will be stockpiled. Page 2-13 Section 2.3.1.1 indicates that the actual volume of soil salvaged and dimensions of the stockpile will be shown on an as-built map.

Berms (and/or silt fences) and a three-strand barbed wire fence will be used to protect stored topsoil (Section 2.3.1.4, page 2-18). The stockpile will be vegetated (Section 2.3.4.2, page 2-23), with the forbs and grasses outlined in the seed mix described on page 3-47 (Section 3.4.1.2), revised with this submittal.

The surface of the stockpile will be pitted to retain moisture and reduce erosion (Section 2.3.1.4, page 2-19). In addition the pile will be mulched with grubbed vegetation. This practice is described in the Practical Guide to Reclamation (DOGM, 2000), available at <http://dogm.nr.state.ut.us>.

An attempt to reestablish colonies of *Mahonia repens* (Creeping Oregon Grape) will be made by scooping the surface layer of soil from the TUE soils and temporarily storing the soils until topsoil pile construction is complete. The TUE soils and *Mahonia* roots will then be placed on top of the topsoil pile (Section 2.3.1.1, page 2-14). Care in transplanting these plants will help provide immediate protection and erosion control on the topsoil pile. The surface layer of soil carried with the transplanting operation is valuable for it contains seeds, microorganisms, organic matter, elevated levels of nitrogen and phosphorus.

TECHNICAL MEMO

The topsoil stockpile location is shown on Plate 5-2F. This location is out of the drainage and provides protection from flooding.

Findings:

The information provided meets the minimum Operation Plan Topsoil and Subsoil requirements of the Regulations.

RECOMMENDATIONS:

The application should be approved.