

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

May 25, 2005

TO: Internal File

THRU: Peter H. Hess, Environmental Scientist III/Engineering, Team Lead

FROM: Priscilla W. Burton, Environmental Scientist III/Soils

RE: Pace Canyon Drainage and Topsoil Stockpile Revision, Canyon Fuel Company, LLC., Dugout Canyon Mine, C/007/039, Task ID #2248

SUMMARY:

The application describes the construction of the south topsoil stockpile in an ephemeral drainage of Pace Canyon. No new disturbance acreage is added to the current total of 2.7 acres. There will be two stockpiles at the site. The north (shaft) stockpile will hold 560 cu yds. The south (portal area) stockpile will hold 3,027 cu yds.

These two stockpiles will provide more than adequate capacity, since the salvage depth is approximately 18 inches over 1.3 acres, yielding 3,192 cu yds of topsoil.

Baseline analytical information was sampled on April 1, 2004, but was not available from the laboratory for this review.

TECHNICAL ANALYSIS:

OPERATION PLAN

TOPSOIL AND SUBSOIL

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

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Analysis:

In Pace Canyon, the soil survey indicates that variable soil depths (from 0 – 36 inches) are salvageable (Appendix 2-3). The soils map indicates that most of the proposed disturbed area is steep terrain that will not provide topsoil for salvage. Areas along either side of the existing road that have been either undisturbed or affected (but with no effect to soil pedology) will be the source of topsoil salvage. The MRP indicates in section R645-301-232.100 that soil recovery will be maximized and topsoil and subsoil will be salvaged and stored together. Consequently, the presence of a qualified person to direct the salvage is indicated. For the purposes of calculation, an average of 18 inches salvaged from 1.3 acres is assumed in Appendix 2-9. A salvage quantity of 3,100 cu yds was calculated for Pace Canyon. The topsoil will be sampled at the time of salvage for the parameters indicated in MRP Section R645-301-233.300.

Topsoil Storage

Two stockpiles will be located in Pace Canyon for reclamation of the fan portal (Appendix 2-9 and Plate PC5-2). Both will be located on undisturbed ground that is demarcated with marker strips. These stockpiles will hold 566 and 3,027 cu yds. They will be constructed with 2h:1v side slopes (Appendix 2-9). Figure 1 in Appendix 2-9 indicates the maximum depth of the south stockpile will be 15 – 17 feet. The maximum depth of the north stockpile will be 10 ft deep.

The north stockpile will be surrounded with a subsoil berm (Section 234.200). This berm will be three feet tall at its lowest point (designs for this berm are on pg 37 of Attachment 1 in Appendix 7-12). The south stockpile will have berms on either side directing flow to a silt fence. At the lower portions, this berm will be two feet tall (designs in Appendix 7-12 Attachment 1, pp. 36-38).

Topsoil at Pace Canyon will also be temporarily stockpiled above the portal and along the channel diversion area for immediate replacement after construction of the portal and channel diversion (Plate PC5-2 and MRP section 242.100). The temporary stockpile will be protected with a silt fence. The entire disturbed area will be fenced to protect the topsoil stockpiles from grazing and to protect the livestock herd in Pace Canyon Grazing Allotment No. 24085.

Findings:

The information provided meets the requirements of this section.

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

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

Analysis:

Soil Redistribution

Soil will be replaced in all disturbed areas (except the road and beneath the topsoil stockpiles) in Pace Canyon (see Plate PC5-6). In Pace Canyon, 1.5 acres will be revegetated. Soil stockpiled at the Pace portal site will be moved using a Cat D8 dozer.

Topsoil will be removed from the stockpile locations down to the fabric markers. The native soil will be gouged, mulched, and seeded (Plate 5-6C). Removal of the culvert during reclamation of the ephemeral channel (PCRD-1) beneath the south stockpile will result in portions of the channel being reconstructed with rock ($D_{50} = 3$ inch). Reconstructed portions of the channel will be tied into the undisturbed pre-existing ground, as the re-established channel will follow the pre-existing course. Reconstruction of PCRD1 is described in section 762.100 of the MRP.

Findings:

The information provided meets the regulatory requirements of this section.

RECOMMENDATIONS:

Approval is recommended.

Soil chemical analyses from the April 1, 2005 sampling must be provided to the Division as soon as they become available.