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December 14, 1998

TO: File

THRU: Joe Helfrich, Permit Supervisor *JH*

FROM: Robert Davidson, Soils Reclamation Specialist *RJD*

RE: Permit Modification to As-Built Conditions, Cyprus Plateau Mining Corporation, Willow Creek Mine, ACT/007/038-98G, Folder #2, Carbon County, Utah

SYNOPSIS:

Cyprus Plateau Mining Corporation (CPMC) has submitted a package to update the Willow Creek Mine permit to as-built status. The updated information documents field changes made during and after construction, including amendment modifications for the Clean Coal Stockpile Expansion, degassification wells, and Barn Canyon Shaft.

TECHNICAL ANALYSIS:

OPERATION PLAN

TOPSOIL AND SUBSOIL

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

Analysis:

The As-built submittal includes discussion of topsoil salvage and storage as follows:

- Topsoil Salvage
- Soil Storage in Gravel Canyon

Topsoil Salvage

Subsequent permit modifications since construction have resulted in an overall increase of disturbance acreage for the Willow Creek Mine. Updated soils operational information concerning these modifications are documented. These permit modifications include the clean coal stockpile expansion, degassification wells, Schoolhouse Canyon Refuse soil salvage, and Barn Canyon Shaft installation. The following table summarizes each of these permit modifications in terms of acreage and total soils salvaged:

Permit Area	disturbed acreage	Soil Salvage Yd ³
Barn Canyon	0.46	906.4
Clean Coal Pile	3.91	10,639
Schoolhouse Canyon	7.35	15,600
Degassification wells	2.2	1,775

Within the Barn Canyon disturbance area, *Map Unit A, Perma sandy loam*, is mapped in an undisturbed area under predominantly Gambel's oak vegetation. An average 2 feet of suitable soil is available for salvage and will include a 0.107 acres. Pockets of soil salvage may reach depths of 35 inches, but are not included within the projected soil salvage volumes. This soil is classified as a Mollisol which have deep rich A horizons. *Therefore, this soil needs to be salvaged and segregated from other soils salvaged from this site.*

Topsoil Storage

As-built information states that long-term soil storage will be in the existing Gravel Canyon Topsoil stockpile for Barn Canyon, clean coal pile expansion and School House Canyon. The Barn Canyon project will generate 906.4 CY and shows soil storage in the existing Gravel Canyon stockpile. *For Barn Canyon, Map Unit A Mollisol (345 CY), needs to be salvaged, segregated and stored separately from the other salvaged soils for the purpose of returning this topsoil to Barn Canyon as the final top dressing during reclamation.*

Table 4.2-1, Soil Recovery and Storage Plans, and Table 4.2-1A, Justification For Soil Salvage Assumptions, have been updated to reflect these soil salvage activities.

Findings:

Information provided in the proposal is not considered adequate to meet the requirements of this section of the regulations. Prior to final approval, the applicant must provide the following in accordance with:

R645-301-232 and R645-301-234, For Barn Canyon, Map Unit A Mollisol (345 CY), needs to be salvaged, segregated and stored separately from the other salvaged soils for the purpose of returning this topsoil as the final top dressing during reclamation.

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

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

Analysis:

Information contained in Section 5.2.2.2, Soil Replacement Practices, shows updated soil replacement information. However, there are conflicts with soil recovery and replacement information contained in this section when comparisons are made with Table 4.2-1 as follows:

- Willow Creek Surface Facilities Area. Section 5.2.2.2 shows 135,266 CY available for the Willow Creek Surface Facilities Area reclamation. After reviewing Table 4.2-1, the 135,266 CY volume includes an additional 15,600 CY, which is the volume of soil salvaged from Schoolhouse Canyon. The extra 15,600 CY of soil should be included in the volume of soil for Schoolhouse Canyon reclamation, not the Willow Creek Surface Facilities Area. The resulting volume should be 119,666 CY with an average replacement soil depth of 16.2 inches. As a note, the 135,266 CY gives 18.3 inches of soil replacement, not the 15 inches as shown.
- Shoolhouse Canyon Refuse Area - The volume of soil available for reclamation as shown in Section 5.2.2.2 is 97,000 CY. This volume should be increased by 15,600 CY for soil salvaged from the Shoolhouse Canyon during refuse expansion activities. This increases the total volume of soil available to 112,600 CY for a 26.8 inches effective soil replacement depth.

Findings:

Information provided in the proposal is not considered adequate to meet the requirements of this section of the regulations. Prior to final approval, the applicant must provide the following in accordance with:

R645-301-120, There are conflicts with soil recovery and replacement information contained in Section 5.2.2.2 when comparisons are made with Table 4.2-1. For the Willow Creek Surface Facilities Area, the resulting volume should be 119,666 CY with an average replacement soil depth of 16.2 inches. For the Schoolhouse Canyon Refuse Area, the volume of soil available for reclamation should be 112,600 CY for a 26.8 inches effective soil replacement depth.

Maps are difficult to read and interpret. Clarity needs to be restored for contours and other pertinent features.