



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

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TO: File

THRU: Pamela Grubaugh-Littig, Permit Supervisor *psl*

THRU: Daron Haddock, Permit Supervisor *DH*

FROM: Robert Davidson, Soils Reclamation Specialist *RAD*

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

SYNOPSIS:

Cyprus Plateau Mining Corporation (CPMC) has revised and updated the Willow Creek Mine permit to as-built status. This submittal was first reviewed by R. Davidson in December 1998, and then again in May 1999 by P. Burton. The As-Built submittal documents field changes made during and after construction, including amendment modifications for the Clean Coal Stockpile Expansion, degassification wells, and Barn Canyon Shaft. This Technical Analysis reviews the latest submission made on August 3, 1999.

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

The disturbed area boundaries shown on Figure 3.1-1 Barn Canyon Shaft Facility Soils Study have been changed from the original map submitted in 1998. Boundaries of the soil map units were extrapolated from the original map based upon information received from Jim Nyenhuis. Exhibit 5, Soils Information, contains the original Barn Canyon soil survey and field notes, including the original Figure 3.1-1, Soils Map.

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 topsoil	0.46	906
Barn Canyon Substitute Topsoil	0.46	1,646
Clean Coal Pile	3.91	10,639
Schoolhouse Canyon	7.35	15,500
Degassification wells	2.2	2,319

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. 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. This soil will be salvaged and segregated from other soils salvaged from this site as described on page 4.5-12 and Table 5.4-1 of the MRP. Table 4.2-1 indicates that 345.8 yards of Mollisol (Undisturbed-A) will be salvaged and placed in the Willow Creek storage location as shown on Map 18B. The total projected acreage for soil salvage is estimated at 0.46 acres. If the entire area within the disturbed area boundary is disturbed, the maximum area would increase to 0.84 acres.

Topsoil Storage

Four long-term soil storage sites are described in the MRP. They are the Gravel Canyon site; two storage piles in Crandall Canyon; and the topsoil stockpile site at Willow Creek as follows:

- The two Crandall Canyon stockpiles contain 18,000 CY of soil. The Gravel Canyon pile is discussed in the PRCC mine reclamation plan.
- The Gravel Canyon stockpile originally contained 97,000 CY of soil. The original volume placement is discussed in the PRCC mine reclamation plan. The Gravel Canyon stockpile is projected to contain 125,656 CY of soil, with 10,639 CY of soil salvaged from the clean coal pile expansion and sediment pond 011 expansion, 15,810 CY of soil salvaged from the Schoolhouse Canyon refuse pile expansion, and 2,207 CY of subsoil salvaged from future construction of the Barn Canyon ventilation shaft site.
- The Willow Creek stockpile currently contains 120,470 CY of soil from soil salvaged during construction of the Willow Creek site. An additional 346 CY from Barn Canyon undisturbed A horizon topsoil will be placed on the Willow Creek stockpile and will bring the total volume to 120,816 CY.

Barn Canyon Ventilation Shaft Site

The Mollisol soil, undisturbed A horizon topsoil (345.8 CY), will be separately salvaged and handled from the subsoil during the Barn Canyon development and will be placed on the Willow Creek stockpile as shown on Map 18B. Tables 4.2-1 and 4.2-1A indicate that the Barn Canyon project will generate 2,207 CY of subsoil and substitute topsoil. Of this amount, 1646 CY of soil will be excess cut material from deeper soils taken from both Map unit A, Perma sandy loam and from Map Unit B, Pathead cobbly loam. These deeper cut materials will extend past the deeper soils and into parent material, and therefore, qualify as substitute topsoil. Projected subsoil salvage will include 37.2 CY from disturbed C horizons and 523.4 CY from undisturbed B horizons.

Findings:

Information provided in the application is considered adequate to meet the requirements of this section of the regulations.

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.

Degassification Wells - The information concerning reclamation of the degassification wells has been omitted from section 5.2.2.2 and Table 4-2.1. This is acceptable because the Division acknowledges that the wells are under BLM jurisdiction.

Findings:

Information provided in the application is considered adequate to meet the requirements of this section of the regulations.