



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
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September 11, 1998

TO: File

THRU: Joe Helfrich, Permit Supervisor *JH*

FROM: Robert Davidson, Reclamation Soil Scientist *RJD*

RE: Abatement for N98-45-3-1, Genwal Resources, Inc., Crandall Canyon Mine, ACT/015/032-98D, Folder #2, Emery County, Utah

## SYNOPSIS

During culvert installation and pad construction, topsoil was removed from Map Unit C (Figure 8B) in preparation for the permanent coal storage area. However, during coal storage and stockpiling activities, coal was pushed up beyond area C where topsoil had not been stripped, but vegetation had been removed. In addition, soil was salvaged from a nose-cut area at the rear of the pad. This nose-cut area and soil salvage operation was not prescribed by the MRP nor directed under the supervision of a soil's specialist. As a result, Notice of Violations N98-45-1-1 and N98-45-3-1 were issued for failure to remove topsoil from an area to be disturbed and failure to conduct mining and reclamation operations only as prescribed in the approved mining and reclamation plan.

An amendment for the Mine Reclamation Plan for abatement of NOV N98-45-1-1 was received in June 1998 and was approved on June 21, 1998. This NOV was terminated on Sept. 4, 1998 after soil was salvaged from the slope and placed in Topsoil Stockpile #4.

On September 4, 1998, Genwal Resources, Inc. presented an amendment for the Mine Reclamation Plan for abatement of NOV N98-45-3-1. The amendment addresses the nose-cut area and updates soil salvage volumes for the entire culvert expansion project. This TA provides the soils technical analysis of this recently submitted amendment.

## **OPERATION PLAN**

### **TOPSOIL AND SUBSOIL**

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

#### **Analysis:**

The amendment sufficiently presents information for updating soil salvage activities associated with the culvert pad expansion for both the southern flank of the coal pile and the nose-cut area at the rear of the expansion pad as follows:

- Surface Facility Expansion Topsoil Removal Reports.
- Coal Stockpile Area Topsoil Salvage (N98-45-1-1).
- Nose Cut Area Topsoil Salvage (N98-45-3-1).
- Chapter 2, Soils, Updated For Topsoil Salvage and Storage

#### **Surface Facility Expansion Topsoil Removal Reports.**

The salvage report is divided into Part I and II for soil salvage activities during Summer 1997 and August 1998, respectively. Both soil salvage activities were supervised and monitored by a privately contracted environmental consultant, Patricia K. Johnston. Part I, Summer 1997, documents soil salvage methodology and volumes identified on Figure 8B as map Units A (North Slope Area), B (South Slope Bench Area), C (Coal Pile Area), and D (South West Corner of Mine Yard). A total of 3, 780 cubic yards was salvaged between each of the areas and stored in Topsoil Stockpile #4 at the mouth of Crandall Canyon.

#### **Coal Stockpile Area Topsoil Salvage (N98-45-1-1).**

Part II, August 1998, likewise documents additional soil salvage for the Coal Pile storage area associated with abatement of NOV N98-45-1-1. 1998. Proposed work was submitted as Amendment 98B and was approved by the Division on June 21, 1998. During coal storage and stockpiling, coal was pushed up beyond area C on the south slope onto an area where topsoil had not been stripped. Genwal first removed the coal from the affected topsoil using the best available technology available prior to salvaging the topsoil from the south slope area that was and could potentially be affected by the coal stockpile in the future. Topsoil salvage took place during August 5-18, 1998, under the supervision of Patricia K. Johnston. The approximate area of soil salvage is identified as Map Unit F on Figure 8B. Approximately 690 cubic yards was salvaged and stored in Topsoil Stockpile #4. According the to report, the visible topsoil depth averaged 3-4 inches over this area but 8-9 inches were actually removed due to the operational

constraints of the equipment and the steepness of the slope. The report contains color photos documenting coal clean-up and soil salvage activities.

#### **Nose Cut Area Topsoil Salvage (N98-45-3-1).**

Immediately east and contiguous to Unit D (Figure 8B) is a rocky point that was recontoured during the yard expansion. Figure 8B identifies this area as Map Unit E. The amendment describes the recontoured rocky point as a cut-slope disturbance located in the southwest portion at the rear of the mine yard expansion pad. Plate 5-3 was revised to reflect the topography and the as-built configuration of the nose-cut area. Topsoil was removed from this point, but was not documented in the Surface Facility Expansion Topsoil Removal Reports because the work was done without the supervision of Patricia K. Johnston. Nielson Construction Project Manager, Mark Greenhaulgh, oversaw the topsoil salvage from this nose-cut area and stockpiling at stockpile #4. Affected acreage is shown as 0.11 acres with a total of 108 cubic yards of soil salvaged.

#### **Chapter 2, Soils, Updated For Topsoil Salvage and Storage.**

The amendment updates soil salvage volumes for soil removed during culvert installation to expand across Crandall Canyon Creek, including soil salvage activities associated with both the southern flank of the coal pile and the nose-cut area at the rear of the expansion pad. Topsoil salvaged has occurred in 7 distinct areas as shown on Figure 8B. These areas include those areas originally identified in the MRP (Map Units A, B, & C) and four additional areas (Map Units D, E, F, & G) identified as follows:

- Unit A - The area south of the warehouse identified as the north slope area (0.14 acres, 180 CY of salvaged soil).
- Unit B - The south slope bench area (0.49 acres).
- Unit C - The south slope of the adjacent hillside to the coal pile area (0.41 acres, 1,728 CY of soil salvaged between Unit B and C).
- Unit D - The upper west end of the pad where deep soils were identified for salvage (0.28 acres, 1,872 CY of salvaged soil).
- Unit E - The rocky point that was cut during yard expansion, which is located immediately east and contiguous to Unit D (N98-45-3-1 and N98-39-3-1). Topsoil was removed from this hillside without the supervision of Pat Johnston and is not included in Pat's soil salvage report. Nielson Construction Project Manager, Mark Greenhaulgh, oversaw the topsoil

removal and stockpiling (0.11 acres, 108 CY of salvaged soil).

- Unit F - The upper south slope, adjacent hillside to the coal pile area (N98-45-1-1). Coal-affected topsoil was cleaned and topsoil salvaged from the upper south slope above Unit C (0.15 acres, 690 CY of salvaged soil).
- Unit G - A narrow strip along the south side of the road and the old loadout site and from the area that was disturbed during sediment pond construction (0.22 acres, 178 CY of salvaged soil).

Between all salvage areas, 4,756 CY of topsoil have been salvaged and placed in stockpile #4 for use during reclamation. Original projections estimated 3,480 CY of topsoil was available for salvage during the culvert expansion project. Therefore, the amount of topsoil actually salvaged exceeded the original projection by 1,276 cubic yards. However, 798 cubic yards are identified and associated with the Notice of Violations N98-45-1-1 and N98-45-3-1.

Section 2.42, Soil Redistribution, has been updated to accurately reflect topsoil requirements and identifies each soil redistribution area according to acreage and soil replacement depth with resulting required volumes of soil. The Expansion Area lists 3 areas for soil redistribution: North Slope Area, South Slope Bench Area, Coal Pile Area, SW corner of mine yard, Nose cut area, Upper coal pile area and Loadout/pond area. The soil redistribution areas and acreage listed on page 2-10 agree with Figure 8B. Topsoil Stockpile #4 information listed on page 2-11 agrees with Figure 8B and has been updated to accurately reflect topsoil requirements.

Table 2-1, Soil Removal Volumes, has been removed from Chapter 2 because it no longer applies. Table 2-1 was originally placed in the chapter to project approximate soil salvage volumes based on available information. Figure 8B has been updated to show actual salvage areas and resulting soil salvage volumes as they occurred during culvert and pad installation.

**Findings:**

The requirements of this section of the regulations are considered adequate.