



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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October 31, 1989

TO: Susan C. Linner, Permit Supervisor

FROM: Henry Sauer, Reclamation Soils Specialist *HS*

RE: Analyses of Topsoil Material Sampled from the Proposed Area of Surface Disturbance Associated with Construction of Undisturbed Diversion Ditch-1A (UD1A), Genwal Coal Company, Wellington Preparation Plant, ACT/007/012-89A, Folder #2, Carbon County, Utah

SYNOPSIS

Laboratory analyses of referenced material has been submitted (10/30/89) and reviewed. Material sampled is highly saline/sodic in nature (electrical conductivity (E.C.) > 4 mmhos/cm 25°C; sodium absorption ratio (SAR) > 12 fine texture and SAR > 15 coarse texture).

The material to be excavated should not be salvaged or stored as a plant growth medium for final reclamation. Excessive salts, and exchangeable sodium may severely inhibit establishment of desirable perennial species upon stockpiling and final redistribution.

A variance to UMC 817.22 Topsoil: Removal is granted contingent upon the operator's identification and the Division's approval of suitable substitute topsoil material [UMC 817.22(B)(2)].

ANALYSIS

On October 16, 1989, Tim Tomson (Genwal Coal Company) and Henry Sauer (DOGM) conducted a survey of the proposed disturbance associated with UD-1A. The survey was conducted to determine the location of one representative soil sample for the proposed disturbance and to obtain depth segregated soil samples from that location.

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Genwal Coal Company
Wellington Preparation Plant
Analyses of Topsoil Material

Two samples were obtained from a sample site approximately 400 feet southwest of the Coarse Refuse Pile along the valley floor. Sampling depths were 0-6" and 6-12". Laboratory analyses were conducted in accordance with the Division Guidelines for Management of Topsoil and Overburden, Table 1. Soluble phosphorus and available water capacity (in/in) analyses were recommended but were omitted from the laboratory analysis.

E.C. and the SAR of both depths segregated samples were unacceptable when compared with the Division Guidelines for Management of Topsoil and Overburden, Table 2.

	Electrical Conductivity <u>mmhos/cm @ 25°C</u>	<u>SAR</u>	<u>PH</u>	<u>Texture</u>
Sample 0"-6"	20.3	69.4	8.3	Sandy Loam
Sample 6"-12"	17.7	88.5	8.5	Sandy Clay Loam

RECOMMENDATION

The operator may be granted a variance from UMC 817.22 Topsoil Removal for the reference disturbance. The variance is contingent upon the operator's identification and the Division's approval of a suitable substitute topsoil material.

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