



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

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August 7, 2001

Chuck Semborski, Environmental Supervisor
Energy West Mining Company
P.O. Box 310
Huntington, Utah 84528

Re: Soil Sampling, PacifiCorp, Des Bee Dove Mine, [REDACTED] 17-AM01B, O [REDACTED]

Dear Mr. Semborski:

The Division review of the soil sampling amendment was completed in June 2001. A copy of our Technical Analysis is enclosed for your information. Deficiencies noted in the Technical Analysis must be adequately addressed prior to approval.

Due to the issues raised by the complete inspection on June 26, 2001 and the subsequent notice of violation that was issued during the partial inspection on July 9, 2001, the Division is uncertain whether you will continue to pursue this submittal. In order for us to continue to process your application, please respond to these deficiencies by September 1, 2001.

If you have any questions, please call me at (801) 538-5268 or Priscilla Burton at (801) 538-5288.

Sincerely,

A handwritten signature in cursive script, appearing to read "Pamela Grubaugh-Littig".

Pamela Grubaugh-Littig
Permit Supervisor

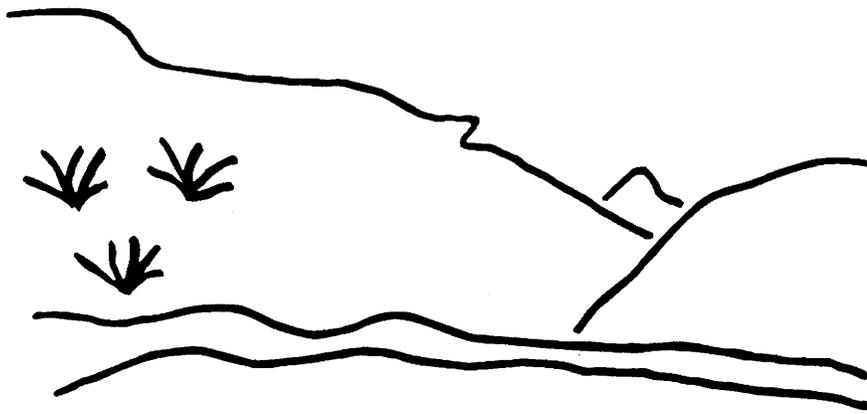
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Enclosure:

cc: Price Field Office

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State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Des Bee Dove Mine

Soil Sampling

C/015/017-AM01B

Technical Analysis

August 1, 2001

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INTRODUCTION

TECHNICAL ANALYSIS

INTRODUCTION

This amendment adds a soil-sampling plan for the spoil moved during excavation of the tipple pad and storage yard. Des Bee Dove Mine is entering reclamation with very little substitute topsoil cover and no topsoil. A previous amendment (AM01A) proposed to use "suitable valley fill" material from the on-going excavation of the coal mine waste beneath the storage yard for reclamation of the Little Dove and Beehive Mine pads. This amendment to the plan enables Energy West to characterize the tipple and storage yard pad spoil for its potential as substitute topsoil.

This amendment was received June 8, 2001 after a conference call between Energy West and the Division on May 30, 2001, during which the Division learned that Energy West Mining did not salvage material from the well vegetated outslope of the storage yard pad. Concerned that Energy West had lost an opportunity to salvage the best available material in the permit area, the Division requested:

- Energy West to add a new page 4-37a that would describe a soil-sampling plan for spoil/soil/substitute plant supporting material.
- The new plan would require Energy West to refine their existing sampling plan to include additional sampling locations to adequately characterize the substitute soil/spoil material.
- Sampling of this material would be performed no later than July 31, 2001.
- Samples would be collected from the excavated material placed on the bathhouse pad and along the north side of the tipple pad in concert with DOGM personnel.
- Energy West would not place additional spoil material on top of the currently stored material to prevent loss, diminution, or contamination.

The complete inspection of June 26, 2001 revealed that Energy West dismissed the Division's concerns about soil quality, segregation, and separation from refuse. The spoil material that was the topic of the June 8 submittal (and this Technical Analysis) was buried underneath a fresh layer of waste and refuse.

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INTRODUCTION

SUMMARY OF OUTSTANDING DEFICIENCIES

SUMMARY OF DEFICIENCIES

The Technical Analysis of the proposed permit changes cannot be completed at this time. Additional information is requested of the permittee to address deficiencies in the proposal. A summary of deficiencies is provided below. Additional comments and concerns may also be found within the analysis and findings made in this Draft Technical Analysis. Upon finalization of this review, any deficiencies will be evaluated for compliance with the regulatory requirements. Such deficiencies may be conditioned to the requirements of the permit issued by the Division, result in denial of the proposed permit changes, or may result in other executive or enforcement action as deemed necessary by the Division at that time to achieve compliance with the Utah Coal Regulatory Program.

Accordingly, the permittee must address those deficiencies as found within this Draft Technical Analysis and provide the following, prior to approval, in accordance with the requirements of:

Regulations

R645-301-233, The sampling plan should indicate that sampling will be conducted by a qualified soil scientist. The plan should include a description of the sample frequency, sample depth intervals, and a time frame for soil sampling to occur. The sampling plan should include provisions for field soil description notes and analysis according to the parameters listed on page 4-38 of the MRP. (Please submit original laboratory data sheets to eliminate data entry errors.) Further, the amendment must indicate that once identified as a potential suitable substitute topsoil resource, the spoil material will be segregated and protected from burial or contamination..... 9

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SUMMARY OF OUTSTANDING DEFICIENCIES

ENVIRONMENTAL RESOURCE INFORMATION

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

Minimum Regulatory Requirements:

Provide adequate soil survey information on those portions of the permit area to be affected by surface operations or facilities consisting of a map delineating different soils, soil identification, soil description, and present and potential productivity of existing soils.

Where selected overburden materials are proposed as a supplement or substitute for topsoil, provide results of the analysis, trials and tests required. Results of physical and chemical analyses of overburden and topsoil must be provided to demonstrate that the resulting soil medium is equal to or more suitable for sustaining revegetation than the available topsoil, provided that trials and tests are certified by an approved laboratory. These data may be obtained from any one or a combination of the following sources: U.S. Department of Agriculture Soil Conservation Service published data based on established soil series; U.S. Department of Agriculture Soil Conservation Service Technical Guides; State agricultural agency, university, Tennessee Valley Authority, Bureau of Land Management or U.S. Department of Agriculture Forest Service published data based on soil series properties and behavior; or, results of physical and chemical analyses, field site trials, or greenhouse tests of the topsoil and overburden materials (soil series) from the permit area. If the permittee demonstrates through soil survey or other data that the topsoil and unconsolidated material are insufficient and substitute materials will be used, only the substitute materials must be analyzed.

Analysis:

Elevation is 7,800 feet on a south to southeast exposure and slopes of 1½H:1V to 2H:1V. The plant community is Utah juniper and pinyon pine. Plants within this community include Salina wildrye, western wheatgrass, and Indian ricegrass.

Soils were not salvaged during the development of the pre-SMCRA¹ mine. However, adjacent soils have been described in the MRP as either:

- Typic Ustochrepts (50%), which are characterized by a 35 cm thick (13 inches) sandy loam surface layer with 25% coarse fragments. Underlying this layer is a stony loam layer 100 cm thick (39 inches) with up to 50% coarse fragments.

Or

- Lithic Ustorthents (25%) that are characterized by rock within 50 cm or 19 inches.

Also present are small areas of Mollisols on the north and east facing slopes. In general, Mollisols are deep, well drained, with a well developed A horizon. See the General Soil Map of the Permit Area, Drawing #CE-10502-DS.

¹ Surface Mining Control and Reclamation Act (SMCRA) of 1977 is Pub L 95 87.

ENVIRONMENTAL RESOURCE INFORMATION

Volume 1, Part 2 of the MRP (page 2-170) states, "Nowhere in the vicinity is there a source of [soil] material." Yet over the past decade, the mine operation has cultivated suitable growth material on the outslopes of the pads, including the outslope of the storage yard pad. Seeding of these outslopes has been very successful and the resulting growth medium is among the best in the permit area due to its microbial activity, nutrient status, and organic matter. The MRP lays plans to salvage and utilize the outslope material (where disturbed) as substitute topsoil.

If 18-inches had been salvaged from the tipple pad outslope (125 feet x 150 feet), approximately 1,041 cubic yards of substitute topsoil could have been gained (see Drawing CM-10333-DS Sheet 1 of 2). Since no soil was salvaged from the outslope, Energy West intends to identify the most suitable soil excavated.

Findings:

Information provided in the proposed amendment is adequate to meet the minimum Environmental Description of the Soil Resource requirement of the Regulations.

OPERATION PLAN

OPERATION PLAN

TOPSOIL AND SUBSOIL

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

Minimum Regulatory Requirements:

Topsoil removal and storage

All topsoil shall be removed as a separate layer from the area to be disturbed, and segregated. Where the topsoil is of insufficient quantity or of poor quality for sustaining vegetation, the selected overburden materials approved by the Division for use as a substitute or supplement to topsoil shall be removed as a separate layer from the area to be disturbed, and segregated. If topsoil is less than 6 inches thick, the operator may remove the topsoil and the unconsolidated materials immediately below the topsoil and treat the mixture as topsoil.

The Division may choose not to require the removal of topsoil for minor disturbances which occur at the site of small structures, such as power poles, signs, or fence lines; or, will not destroy the existing vegetation and will not cause erosion.

All materials shall be removed after the vegetative cover that would interfere with its salvage is cleared from the area to be disturbed, but before any drilling, blasting, mining, or other surface disturbance takes place.

Selected overburden materials may be substituted for, or used as a supplement to, topsoil if the operator demonstrates to the Division that the resulting soil medium is equal to, or more suitable for sustaining vegetation than, the existing topsoil, and the resulting soil medium is the best available in the permit area to support revegetation.

Materials removed shall be segregated and stockpiled when it is impractical to redistribute such materials promptly on regraded areas. Stockpiled materials shall: be selectively placed on a stable site within the permit area; be protected from contaminants and unnecessary compaction that would interfere with revegetation; be protected from wind and water erosion through prompt establishment and maintenance of an effective, quick growing vegetative cover or through other measures approved by the Division; and, not be moved until required for redistribution unless approved by the Division.

Where long-term surface disturbances will result from facilities such as support facilities and preparation plants and where stockpiling of materials would be detrimental to the quality or quantity of those materials, the Division may approve the temporary distribution of the soil materials so removed to an approved site within the permit area to enhance the current use of that site until needed for later reclamation, provided that: such action will not permanently diminish the capability of the topsoil of the host site; and, the material will be retained in a condition more suitable for redistribution than if stockpiled.

The Division may require that the B horizon, C horizon, or other underlying strata, or portions thereof, be removed and segregated, stockpiled, and redistributed as subsoil in accordance with the above requirements if it finds that such subsoil layers are necessary to comply with the revegetation.

Analysis:

Part 4, page 4-37 of the MRP indicates that a soil-sampling program will be conducted to

determine the extent of suitable substitute topsoil material. Sample locations are proposed. Parameters to be analyzed are listed, following the Division's 1988 soil guidelines:

Texture,
SAR (meq/L),
pH,
EC (mmhos/cm),
Saturation Percentage (%),
Organic Carbon (%),
Total N (%),
Available Phosphorus (mg/kg),
Boron (mg/kg),
Selenium (mg/kg),
Acid-Base Potential.

This submittal will add page 4-37a to clarify that spoil unearthed during the storage yard, tipple yard and Deseret Pad excavation will be sampled for its potential as substitute topsoil. This submittal indicates that the samples will be analyzed according to "Appendix A of the Guidelines for Management of Topsoil and Over Burden for Underground and Surface Coal Mining (Leatherwood and Duce, 1988)." However, there is no Appendix A to the 1988 Guidelines.

The valley fill was sampled in 2000 and the results of the sampling were submitted in Appendix A of AM01A, which has not been approved. Sample locations are shown on a figure included in the appendix. The main limiting factors of this valley fill are its texture (sand) and organic carbon content (70 – 80%), and elevated SAR values. This material is not suitable for use as substitute topsoil. In the course of excavating this material, some promising spoil was uncovered and placed on the bathhouse pad and on the north side of the tipple pad.

The sampling plan should indicate that a qualified soil scientist will conduct the sampling. The sampling plan should also include the frequency of sampling and depth interval of samples. The sampling plan should indicate a time frame for sampling to occur.

The Division requests that during sampling field notes are taken to record percent rock fragments and Munsell color and moisture content along with sample location. This information should be added to the submittal with the original laboratory analysis sheets. Submitting original laboratory data sheets aides in interpretation of the data and eliminates data entry errors.

Laboratory analysis of total organic carbon is recommended by the following procedure: Western States Laboratory Proficiency Testing Program Soil and Plant Analytical Methods. 1998. v 4.10. p 88. (combustion method).

Further, the amendment must indicate that once identified as a potential suitable

OPERATION PLAN

substitute topsoil resource, the spoil material will be segregated and protected from burial or contamination.

Findings:

Information provided in the proposed amendment is not adequate to meet the minimum Operations Plan requirements for Topsoil Substitute and Supplements of the Regulations. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-233, The sampling plan should indicate that sampling will be conducted by a qualified soil scientist. The plan should include a description of the sample frequency, sample depth intervals, and a time frame for soil sampling to occur. The sampling plan should include provisions for field soil description notes and analysis according to the parameters listed on page 4-38 of the MRP. (Please submit original laboratory data sheets to eliminate data entry errors.) Further, the amendment must indicate that once identified as a potential suitable substitute topsoil resource, the spoil material will be segregated and protected from burial or contamination.

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