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State of Utah

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TO: File

THRU: Joe Helfrich, Permit Supervisor

FROM: Robert Davidson, Soils Reclamation Specialist

RAD

RE: Modular Coal Plant #2, Wellington Preparation Plant, Nevada Electric Investment Company, ACT/007/012-97G, Folder #2, Carbon County, Utah

SUMMARY:

In order to reclaim coal fines from the existing refuse ponds, NEVADA ELECTRIC INVESTMENT COMPANY has submitted a minor amendment to allow Covol Technologies, Inc., to construct a modular coal fines wash plant, slurry tank, NW tailings impoundment/retention berm, and truck loadout.

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

SOILS RESOURCE INFORMATION

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

Analysis:

The 97G amendment, contains soil resource information for three separate areas that will be disturbed in conjunction with the coal fines wash plant. These areas are shown on Figure 2.40-1, Soil Test Pits and Refuse Delineation, and include:

- Coal Fines Wash Plant - Vegetation Test Plots
- Flotation Cell Pad - Upper Gerst Soils Knoll and Side slopes
- Slurry Feed Tank Pad - Lower Gerst Soils Area

Coal Fines Wash Plant - Vegetation Test Plots

The old vegetation test plots were sampled on July 17, 1997. The test plots consist of 6 to 12 inches of topsoil over either coarse-coal refuse or no coarse-coal refuse. Two pits were dug to obtain soil and coarse-coal refuse samples for analysis. No profile descriptions were obtained other than to note the thickness of the soil treatments. Analysis of the topsoil materials showed elevated levels of Boron (12-14 mg/Kg) which exceed DOGM's guidelines for topsoil and overburden. Analyses results are also provided for the coarse refuse and refuse samples taken from each of the two sample pits (see Table 2.40-1). As a note, both the coarse refuse and refuse exceeded DOGM's guidelines for selenium and boron.

Flotation Cell Pad - Upper Gerst Soils Knoll and Side slopes

A soil survey was conducted on August 12, 1997, for the upper small knoll and associated Side slopes. This top, flat area appears to have been previously disturbed and altered by removal of soil materials since the Gerst soil was uncharacteristically shallow. Four pits were logged and excavated to 60 inches with profile descriptions; pits 1 and 2 were on top with pits 3 and 4 on the Side slopes (see Figure 2.40-1). Also, a line drawn on the map demarcates the coal refuse from the Gerst soils. Complete soil profile descriptions are provided for each pit. Composite samples were taken for Pits 1 and 2; physical and chemical analyses are provided in Table 2.40-2. The soils meet all DOGM parameters for topsoil and overburden.

Slurry Feed Tank Pad - Lower Gerst Soils Area

A stipulation has been made to survey and sample the Gerst soils at the slurry tank area prior to disturbance and to substantiate soil salvage amounts.

Findings:

As determined in the analysis section of this TA, approval of the plan is subject to the following Permit Conditions. Accordingly, the permittee has committed to comply with the requirements of the following Permit Conditions, as specified, and in accordance with the requirements of:

R645-301-220 and R645-301-120, Soil Survey - JBR Environmental Consultants, Inc., will survey at least one additional soil test pit at the Slurry Tank site. This soil pit will be strategically located in the area planned for surface disturbance.

Soil Characterization - Soil survey characterization results will be forwarded to

the Division prior to disturbance and soil salvage.

Soil Sampling - The soil pit will be sampled and analyses provided as outlined by the Division's guidelines for topsoil and overburden¹. Results will be provided when they are received back from the laboratory.

Updated MRP - The MRP will be updated accordingly, including the descriptive text, soil profile description, soil identification, soil pit location on the soil map (Figure 2.40-1).

OPERATION PLAN

TOPSOIL AND SUBSOIL

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

Analysis:

The 97G amendment, contains soil operation's information for three separate areas that will be disturbed in conjunction with the coal fines wash plant. Operational soil's issues are discussed as follows:

- Coal Fines Wash Plant
- Flotation Cell Pad
- Slurry Feed Tank Pad
- General Soil Salvage Items
- Interim Revegetation Testing

Coal Fines Wash Plant

Topsoil materials from the test plots will not be salvaged because the Boron levels (12 to 14 mg/Kg) exceed DOGM's guidelines.

Flotation Cell Pad

Soil resource data indicate that five inches of salvageable topsoil is available from the 8000 ft² pad area, or approximately 123 yd³ of topsoil. No soil salvage occurred on the steep Side slopes below the flotation cells.

Slurry Feed Tank Pad

Soil salvage commitments are initially based on soil resource information for the flotation cell pad area. Therefore, soil salvage commitments are stipulated and will be based on the actual soil survey results for the slurry feed tank pad area. Initial estimates before the actual survey show that 25 yd³ of topsoil will be salvaged from the 1600 ft² pad.

General Soil Salvage Items

No topsoil will be salvaged from access roads.

A third party will ensure quality control during salvage operations.

Soil salvage will be done using a small dozer to carefully remove the topsoil.

Stripped topsoil will be stockpiled at the north stockpile. The stockpile is located adjacent to an existing topsoil stockpile near the Siaperas ditch, within Watershed #7. Soil salvage will be done using a small dozer.

Interim Revegetation Testing

Because of the poor quality and low salvage volumes of the Gerst soils, interim revegetation tests will be instituted on the construction fill materials. Interim revegetation will test if the construction fills are suitable substitute topsoil for final reclamation. Steps were included for fill and seedbed preparation, mulching, fertilization, and seed application.

Findings:

As determined in the analysis section of this TA, approval of the plan is subject to the following Permit Conditions. Accordingly, the permittee has committed to comply with the requirements of the following Permit Conditions, as specified, and in accordance with the requirements of:

R645-301-230, Soil removal and salvage - Soil salvage operations will include all Gerst Soil within the Slurry Feed Tank Pad constructed affected areas under the direction of a non-biased third party soils person.

Update MRP - The MRP operations plan will be updated.

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

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

Analysis:

For final reclamation, 1 ft of topsoil from Borrow Area "B" will be placed on the non-refuse areas, or 355 yd³. In addition to the 148 yd³ of salvaged-soil replacement, the borrow soil will amount for a total soil replacement depth of 15 inches for the flotation and slurry tank areas. Replaced soils will be pocked prior to revegetation.

Construction fills placed may be used as substitute topsoil based on the interim revegetation test program. The Division may require additional testing of the construction fills for acid/toxic parameters for verification as substitute topsoil.

Findings:

The requirements of this section meets the regulatory requirements.

RECOMMENDATIONS:

The permittee must meet the stipulations made in the soil resource and operation sections. These stipulations are for the Slurry Feed Tank Pad area. The soil survey and characterization stipulation must be met prior to disturbance and soil salvage.