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OK

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

March 9, 2012

TO: Internal File

THRU: Steve Christensen, Lead *SJC*

FROM: Priscilla Burton, Environmental Scientist III/Soils *PWB km SOS*

RE: Appendix 5-19 Temporary Re-Opening of B Canyon Portal, West Ridge Resources, Inc., West Ridge Mine, C/007/0041, Task ID #4010

SUMMARY:

West Ridge Resources, Inc requires access to reclaimed, abandoned, exploratory tunnels to seal off the tunnels from current mine workings. The plan is proposed in Appendix 5-19 to the MRP, received February 22, 2012. A soil survey was conducted by Long Resource Consultants and is provided in Attachment 4. The plan calls for salvage and stockpiling of one foot of the surface soil resource from the previously disturbed site. Reclamation is expected to take place immediately following tunnel sealing. A modification of the reclamation plan is recommended prior to approval.

R645-301-244.200, Please modify the reclamation plan described in Chap 2 and Chap 5 to include 1 T/ac straw mulch incorporated into the surface soil and 1 Ton/ac mulch scattered over the surface after seed and mulch application and scattering of slash on the seeded and mulched surface. (These techniques were successfully used in the 1998 AMR/007/930 reclamation.)

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TECHNICAL ANALYSIS:

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.

Analysis:

The reclaimed B Canyon portal is in SWNE Section 14 in T 14 S, R 13 E, Section 14 SWNE (MRP Chapter 1, Section 114.100 and 114.200). The location is shown Appendix 5-19 on Plate 1-1 of Attachment 1. The site was reclaimed by the Division's AMR program in 1998. Records of the reclamation work and seed mix are included in Attachments 2 and 6. Current photos of the site are found in Attachment 3. The B Canyon portal site was part of a larger area surveyed in May 2010. The pertinent portion of the survey is found in Attachment 4. Figure 1 of the survey shows sample locations. Sample pedon B-06 was taken at the portal and pedon B-05 and B-07 were taken below and above the portal along the road. (The blue squares on the road in Figure 1 indicate the road segments described in the survey.) According to Figure 1, Pedon B-06 is located within Soil Map Unit 96 of the Carbon County Soil Survey and in a road segment that faces southeast. The pedon is representative of stream terrace soils, dominated by the Amalia family, a Calcic Haplustalf, with a gravelly surface. Average topsoil recovery depth in this road segment is 20 inches according to Figure 2, however below 12 inches very fine coal fragments were observed in the profile of the reclaimed portal site. Photos 7 through 10 of the soil survey provide images of the B-06 location, the pedon, and the B canyon road in 2010. The soil is a sandy loam with neutral pH. The salvage of one foot is supported by Photo 10 and by the Total Organic Carbon content of 3.4 and 3.7% in the surface 23 cm. The soil is most biologically active in the surface 12 cm as indicated by the N, P, K content diminishing below this depth.

Findings:

The information provided meets the requirements of the Utah Coal Rules for baseline information.

OPERATION PLAN

TOPSOIL AND SUBSOIL

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

Analysis:

Topsoil Removal and Storage

Appendix 15, Attachment 10, Plates 1 of 2 and 2 of 2 illustrate the existing topography and proposed disturbance. Although a disturbed perimeter of 0.25 acres is circumscribed, only 0.07 acres will be re-disturbed by earthwork. Some of the area is an existing access road and turn around. The turnaround area will be used for vehicles, portable generator and portable fan placement. The turnaround area will not have vegetation removed or soil disturbed.

Within the 0.07 acres to be disturbed, the vegetation will be removed and stockpiled. The surface foot of soil will be removed from the area shown on Plate 2 of 2 and stockpiled in the location shown on Plate 2 of 2. Approximately 3,051 cu ft. (or 113 cu. yd.) will be placed in the temporary stockpile. The subsoil will be graded for access. The site will be reclaimed within six months of initial disturbance (App. 5-19, Chap 5, p. 6).

Findings:

The information provided meets the requirements of the Utah Coal Rules for soil salvage.

RECLAMATION PLAN

TOPSOIL AND SUBSOIL AND STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240. And 30 CFR Sec. 817.95; R645-301-244.

Analysis:

Appendix 5-19, Chapter 2, p. 4 and Chapter 5, p. 7 describes the reclamation of the previously disturbed site over the course of three days. The surface will have salvaged soil replaced. Slash will be scattered over the site. The surface will be roughened. Seed will be hand broadcast. The seed mix is the same as that used by the AMR program in 1998 (AMR/007/930, Attachment 6).

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The Permittee noted that vegetation was well established following the 1998 AMR work. The contract specifications for the AMR work were as follows: Application of 1 T/ac mulch (wood fiber, hay or straw) was incorporated into the soil with surface roughening. Seeding occurred within 24 hours of grading. Seeding was followed by the application of an additional ton/ac of mulch. Slash applied to surface after seeding. Please modify the reclamation plan described in Chap 2 and Chap 5 to include 1 T/ac straw mulch incorporated into the surface soil and 1 Ton/ac mulch scattered over the surface after seed and mulch application and scattering of slash on the seeded and mulched surface.

Findings:

R645-301-244.200, Please modify the reclamation plan described in Chap 2 and Chap 5 to include 1 T/ac straw mulch incorporated into the surface soil and 1 Ton/ac mulch scattered over the surface after seed and mulch application and scattering of slash on the seeded and mulched surface. (These techniques were successfully used in the 1998 AMR reclamation.)

RECOMMENDATIONS:

A modification of the reclamation plan is recommended prior to approval.