

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

November 12, 2004

OK

TO: Internal File

FROM: James D. Smith, Environmental Scientist, Team Lead DS

RE: Update Appendix XIV, PacifiCorp, Des-Bee-Dove Mine, C/015/0017, Task ID # 2046

SUMMARY:

PacifiCorp, through their subsidiary Energy West Mining Company, is reclaiming the Des-Bee-Dove mine site and completed regrading and contouring in June 2003. The reclamation plan originally had a strip of vegetation left between the reclaimed bathhouse pad and the canyon bottom. However, the Permittee, the Division, and the contractor agreed in the field to excavate and recontour the entire slope below the bathhouse, working from the top of the slope to the canyon bottom.

Pre-construction estimates of erosion and sediment yield for the reclaimed areas had been done using RUSLE 1-06. Because the RUSLE calculations are very responsive to the slope length parameter, the change in the configuration of the slope below the bathhouse required a recalculation for that area. A previous submittal, Task # 1786, addressed some changes to the RUSLE calculations, but other questions regarding application of RUSLE to this site remained unanswered. This submittal contains a 3.5-inch floppy disk with new RUSLE calculations and a revised Appendix B. The Division's concerns have been addressed by this new submittal.

RECLAMATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

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Analysis:

Hydrologic Reclamation Plan

Prior to construction, estimates of soil loss (A) and sediment yield (SY) for the reclaimed areas had been done using RUSLE 1.06. For this submittal, S and SY were recalculated for all profiles in the disturbed area using updated RUSLE parameters. Profile locations are on Drawing CS1854D. (Elevation contours on Drawing CS1854D are pre-construction estimates, so this map needs to be updated with as-built elevation contours if a new aerial survey is flown for this area.) This submittal contains a 3.5-inch floppy disk with the new RUSLE calculations, and Appendix B has been revised.

In particular, because the RUSLE calculations are very responsive to the slope length parameter (LS), the change in the configuration of the slope below the bathhouse required a recalculation for profile A3-2D. Using a gradient of 47.3% and ground cover of 64%, the Permittee's calculations for profile A3-2D resulted in $A = 0.24$ tons/acre. Contours and profile length on Drawing CS1854D indicate a gradient of approximately 50%, and the reclamation plan calls for a maximum slope of 2H:1V, or 50%. The Division ran RUSLE using a 50% slope, which yielded $A = 0.26$ tons/acre. With a 50% slope and ground cover reduced from 64% to 55%, $A = 0.32$ tons/acre. Both the Permittee's and Division's calculations resulted in $SY = 0.02$ tons/acre/year.

Findings:

Hydrologic information in the submittal meets the requirements of the Coal Mining Rules.

RECOMMENDATIONS:

The amendment should be approved.