

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

September 23, 2005

TO: Internal File

THRU: Pamela Grubaugh-Littig, Permit Supervisor

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

RE: Appendix XVI, Phase 3 Area Reclamation Plan (Sediment Pond), PacifiCorp, Des-Bee-Dove Mine, C/015/0017, Task # 2323

SUMMARY:

Grading, recontouring, and seeding for the Phase 1 and 2 areas of the Des Bee Dove Mines reclamation were completed in 2002 and 2003. Grading, recontouring, and seeding at the pump house area were done in 2000. The sedimentation pond was left in place during this work to provide sediment control while these areas stabilized and vegetation became established. Phase 3 is the reclamation of 4.6 acres at the sedimentation pond and 2.27 acres along the 4,000-ft length of the pond-access road.

Although vegetation does not yet meet bond-release standards in the Phase 1, Phase 2, and pump house areas, it appears to be doing well enough that augmented seeding of large areas is not anticipated.

In addition to vegetation, extreme surface roughening in the form of deep pocking provides sediment control. RUSLE modeling for the Phase 1 and Phase 2 areas indicates the roughening alone should be adequate to prevent erosion and off-site sedimentation, equivalent to conditions on adjacent undisturbed areas. Because of the smaller size and gentler slopes of the Phase 3 area, results of RUSLE modeling from the Phase 1 and 2 has been applied for Phase 3 reclamation.

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TECHNICAL ANALYSIS:

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.

Analysis:

Hydrologic Reclamation Plan

The amendment, Appendix XVI, contains a plan to restore the natural drainage pattern of the sedimentation pond and adjacent areas, including the pond access road. All structures will be removed. Natural drainage patterns will be restored, and all cut and fill slopes reshaped to be compatible with the postmining land use and match the drainage pattern of the surrounding terrain.

Ongoing quarterly surface-water monitoring is described in Section R645-301-731.200. Outfall from the sedimentation pond will be monitored in accordance with the UPDES permit until removal of the pond is complete, at which time this monitoring point will no longer exist. The Permittee will notify the DWQ when the site is eliminated and will notify the Division when DWQ has granted permission to cease monitoring at this site.

The Permittee has created a watershed model using RUSLE (created by the NRCS) to demonstrate the effectiveness of the sediment controls control techniques applied to the Des Bee Dove site. This model was developed for the Phase 1 and Phase 2 areas. The model demonstrates that implementation of the Sediment Control Plan will result in average annual sediment yields that will not be greater than the sediment yield levels from pre-mined, undisturbed conditions. The RUSLE modeling indicates that the requirements of R645-301-731.224 will be met. Because of the smaller size and gentler slopes at the Sedimentation Pond and pond-access road with respect to the Phase 1 and 2 areas, sediment loss should be much lower, described as “negligible” in the narrative in Appendix XVI, Section R645-301-752, and a new RUSLE model was not generated for the sedimentation pond and road area.

Appendix A of Appendix XVI contains a Storm hydrograph printout. Appendix B, labeled Channel Design Information, is the location for all channel design calculations: it contains photos, FlowMaster printouts, and cross sections for the main channel.

Findings:

The Hydrologic Reclamation Plan is adequate to meet the requirements of the R645 Coal Mining Rules.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Reclamation Monitoring And Sampling Location Maps

With removal of the pond, there will no longer be UPDES permitted discharge, so there will be no water monitoring at Des Bee Dove Mine. [09202005]

Findings:

Maps, Plans, and Cross Sections of Reclamation Operations are adequate to meet the requirements of the R645 Coal Mining Rules.

RECOMMENDATIONS:

The amendment should be approved.