

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

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January 22, 2009

TO: Internal File

THRU: Jim Smith, Permit Supervisor, Hydrologist, Team Lead *JS ca/02/09*

FROM: Priscilla Burton, Certified Professional Soil Scientist *PWB mj SCS*

RE: Phase I Bond Release for Remaining Reclaimed Areas [Sediment Pond],  
PacifiCorp, Des-Bee-Dove Mine, C/015/0017, Task ID #3043

### SUMMARY:

The Division received a request for Phase I bond release of the Des Bee Dove sediment pond area on September 2, 2008. A site visit was conducted on December 3, 2008. Approval of the application for Phase 1 bond release of the 13.88 acre sediment pond and access road and two remote Maple Gulch portals, each 0.01 acres, is not recommended until the following information is received.

**R645-301-880.310**, The application should indicate whether the subsoil pile was overexcavated to remove an additional two feet of topsoil material to be redistributed over the reclaimed site, as stated on page 5 of App. XVI. • The plan should indicate on an as built drawing the approximate location of the boundary between the mulching and non-mulching areas. • The plan should either provide copies of original laboratory sheets or provide the name and address of the laboratory that ran the analyses found in App. B in App. XVI. • Use of the pond embankment as substitute topsoil was a field change that was to have been provided with the as built information. Insp. Rpt 876 refers to four field changes that were to have been provided as updates to the Phase 3 Appendix XVI. • App. XVI describes a final topsoil cover depth of 10 inches composed of A and B horizon materials, but As Built DWG 200-2A describes only a three inch depth of topsoil replacement over the pond area and a 12 inch replacement depth over the subsoil storage area. Why? • Section R645-301-243 of App. XVI describes nutrients and amendments to be added based upon laboratory analyses. Please indicate whether any fertilizer was used.

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**TECHNICAL ANALYSIS:**

**RECLAMATION PLAN**

**TOPSOIL AND SUBSOIL**

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

**Analysis:**

**Redistribution**

The requirements for Phase I bond release are outlined in R645-301-880.310. The Rule states that "no bond will be fully released under provisions of this section until reclamation requirements of the Act and the permit are fully met.

As built cross sections were provided for the remote maple gulch portals.

For the sediment pond, the application states that the reclamation basically followed the work outlined in Phase 3, Appendix XVI of the MRP. Ken Fleck signed the C1 form, certifying on behalf of PacifiCorp that the information contained in the application is true and correct.

Nielson Construction began reclamation of the sediment pond in mid-December 2005 and completed the project, including the access road on January 31, 2006 (Insp. Rpt #876, dated Feb. 22, 2006). The pond was filled with subsoil from the subsoil stockpile. The subsoil is fine textured loam to clay loam, alkaline and sodic (App. B, App. XVI). The surface replacement of topsoil and substitute topsoil was composed of sediments cleared from the pond and selected topsoils and subsoils (as described in Section R645-301-224 of App. XVI), except that based upon the cross-section, the Division concludes that the subsoil stockpile was not over-excavated to remove two feet of additional topsoil from the *in-situ* soil beneath the stockpile.

Differences between the App. XVI plans and as built information were noted by comparison of Mass Balance tables provided on Dwg 500-1 (proposed) and Dwg 500-5A (as built) and cross-sections.

App. XVI describes a final topsoil cover depth of 10 inches composed of A and B horizon materials. As Built DWG 200-2A describes a three inch depth of topsoil replacement over the pond area and a 12 inch replacement depth over the subsoil storage area.

As built Dwg 200-1 shows the locations of soil sampling. The plan provides a summary of the laboratory analyses in App. B of App. XVI. Please provide the name and address of the laboratory conducting the analyses.

Use of the pond embankment as substitute topsoil was a field change that was to have been provided with the as built information. Insp. Rpt 876 refers to four field changes were to have been provided as updates to the Phase 3 Appendix XVI, but were not received.

Section R645-301-243 of App. XVI describes nutrients and amendments to be added based upon laboratory analyses. The application should indicate whether any fertilizer was used.

As built Dwg 300-1A provides reclamation area totals. The location of the border between mulching and non-mulching as agreed to in 2006 was not noted on the plate.

As built Dwg 200-2A illustrates the average depth of topsoil and subsoil replacement and provides cross section locations for reclamation of the pond and subsoil stockpile location. Plate 500-4A provides the profile and cross-sections for the 4,000 ft. long access road.

During the bond release inspection on December 3, 2008, the soils at the lowest elevation of the reclaimed pond were saturated. A ring of salt encrusted the soil surrounding the low spot. [In 2006, it was noted that a spring was encountered emanating from bedrock at this low spot (see insp. Report 876 2/22/2006).]

## HISTORY

In 2006, phase I bond release applications were approved under Tasks 2411 and 2513 for the following areas:

- The Pumphouse Area. Reclamation was completed in 1999. It covered 1.56 acres.
- Des Bee Dove Phase 1. Reclamation was completed in 2002. It included approximately 4 acres of pre-SMCRA disturbance at the Des Bee Dove Mine: the Little Dove/Beehive pad (2.13 acres), the substation and water storage area (0.75 acres) and the access road down to the Desert pad (0.97 acres).
- Des Bee Dove Phase 2. Reclamation was completed in 2003. It included 22 acres of (mostly) pre-SMCRA disturbance. The Deseret Mine, Tipple and Bathhouse cover about 8.4 acres. Substitute topsoil was reapplied to 5.25 acres of reconstructed fill slopes on the bathhouse pad and in the lower main drainage and at the Deseret portal and access road to the Beehive portal.

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In 2007 Phase III bond release was approved to facilitate a post mining land use change to industrial (oil and gas extraction) for 0.9 acres of the 2<sup>nd</sup> phase of Des Bee Dove Phase 2 reclamation and 1.62 acres of the pumphouse reclamation areas.

**Findings:**

The information provided does not meet the requirements for Phase I bond release. Prior to approval, the Permittee must provide the following information, in accordance with:

**R645-301-880.310**, The application should indicate whether the subsoil pile was overexcavated to remove an additional two feet of topsoil material to be redistributed over the reclaimed site, as stated on page 5 of App. XVI. • The plan should indicate on an as built drawing the approximate location of the boundary between the mulching and non-mulching areas. • The plan should either provide copies of original laboratory sheets or provide the name and address of the laboratory that ran the analyses found in App. B in App. XVI. • Use of the pond embankment as substitute topsoil was a field change that was to have been provided with the as built information. Insp. Rpt 876 refers to four field changes that were to have been provided as updates to the Phase 3 Appendix XVI. • App. XVI describes a final topsoil cover depth of 10 inches composed of A and B horizon materials, but As Built DWG 200-2A describes only a three inch depth of topsoil replacement over the pond area and a 12 inch replacement depth over the subsoil storage area. Why? • Section R645-301-243 of App. XVI describes nutrients and amendments to be added based upon laboratory analyses. Please indicate whether any fertilizer was used.

**RECOMMENDATIONS:**

An AVS check conducted in conjunction with task 2878 (Trail Mountain mine permit mid-term review) is also pertinent to this PacifiCorps mine.