



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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August 28, 1992

TO: Pamela Grubaugh-Littig, Permit Supervisor ✓

FROM: Thomas Munson, Senior Reclamation Hydrologist TM

RE: Permit Conditions, Five Year Renewal, Pacificorp Electric Operations, Des-Bee-Dove Mine, ACT/015/017, Folder #2, Emery Country, Utah

1. Condition R645-301-728(1) TM

Required Action

The proposed sediment monitoring program is acceptable. The isolation of the plots, capturing all the runoff, drying the sediment samples and comparing the data with precipitation data is an accepted method of collecting worthwhile data on sediment yields for different plot treatments. The operator must submit a conceptual drawing showing dimensions and apparatus to be used in the second phase plot design in Appendix XVII.

Response

The Des-Bee-Dove Haul Road Reclamation Study Runoff and Sediment Yield Monitoring Program and a drawing of the proposed Test Plot Sediment Collection System are found in Appendix XVI. This condition is satisfied.

2&3. Conditions R645-301-731 & R645-301-731.121 (1) TM

Required Action

The BTCA plan, using a typical cross-section of the contour ditch design is found on Drawing CM-10393-DS, Sheet 3 of 5, BTCA Appendix XVII, Volume 7, and the calculations found in Appendix XVII are considered acceptable. This condition will be considered satisfied once the conceptual drawing and the revised Appendix XVII are submitted.

Response

The Des-Bee-Dove Haul Road Reclamation Study Runoff and Sediment Yield Monitoring Program and a Drawing of the proposed Test Plot Sediment Collection System are included in Appendix XVI instead of Appendix XVII as requested. This condition is satisfied.

4. Condition R645-301-742.220(1) TM

Required Action

The January 30, 1992 submittal included page 3-54 which adequately addressed the sediment removal procedure for the pond, including descriptions related to testing of the removed material. The addition to Appendix VII discussed the expected velocities of 24.9 fps over the grouted riprap spillway. The spillway, as designed, will experience supercritical flows at the outlet and, as such, appropriate energy dissipation will be required to dissipate that energy. The grouted riprap spillway would be considered nonerosive and is approved based on the in place inspection program and the commitment to maintain the grout in good repair. The operator will be required to submit an energy dissipation design for the outlet of the spillway capable of withstanding the supercritical velocities.

Response

The operator states that any potential discharge from the pond will flow from the spillway onto natural bedrock. This is considered adequate for energy dissipation and erosion protection at the outlet. This condition is satisfied.

5. Condition R645-301-742.300(1) (TM)

Required Action

The operator has not supplied any calculations for the ditches and culverts draining any areas north and west of drainage area #4. All ditches and culverts will be sized and calculations will be included in the PAP for the mine site. Plate 3-8 must show all hydrologic structures numbered corresponding to calculations in the text.

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Response

Drawing CM-10421-DS, Sheet 1 of 2, Packet 3-8, Volume 3 has been revised to reflect all the drainage areas, culverts, and ditches. Appendix XII gives all the data inputs for the hydrologic calculations associated with any structures. The structures in place were designed using the 10 yr/6 hr storm event. Any structures which have been identified as having erosive velocities have been demonstrated as stable using standard riprap calculations, identifying bedrock, riprap, natural cobble, and boulders where appropriate. This condition is satisfied.

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