



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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October 21, 1996

TO: File #2

THRU: Joe Helfrich, Permit Supervisor *DRH for*

FROM: Steven M. Johnson, Reclamation Specialist *SMJ*

RE: RR1/RR2 Retaining Walls/Southern Embankment of Sediment Pond 12B, Willow Creek Mine, Cyprus Plateau Mining Corp, ACT/007/038-96D, Folder #2, Carbon County, Utah

SUMMARY

The railroad adjacent to the Willow Creek Mine's Castle Gate facilities is being realigned so the grade will suit the trains' capabilities for loading. Because of this work Cyprus Plateau Mining Corp. (CPMC) will need to change the runoff and drainage control plan for effected areas. This is the hydrologic review of CPMC's intended changes.

ANALYSIS

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Diversion Designs

Additional pages have been proposed for Exhibit 13, Appendix D. These pages show the disturbed area culvert designs for C-18, C-19, C-23, C-25, C-26, C-27, and C-28. C-18, C-19, and C-23 are designed to convey the 25-year, 24-hour storm event, and C-25, C-26, C-27, and C-28 are designed for the 10-year, 6-hour storm event. Culverts C-26, C-27 and C-28 are referred to as culverts CGC-10, CGC-9 and CGC-11, respectively, in the text and on the maps. Table 13-11 has been updated to include culverts C-18, C-19, C-23, C-24, and C-25. C-24 is shown on Map 23E-1, in Table 13-11 and designs are in Appendix F.

The locations of Culverts C-18, C-19 and C-25 are shown on Maps 23D-1 and 23E-1. The remaining Culverts are not shown on any map. A culvert noted on Map 23D-1 at the Existing Box Culvert is not design as an operational culvert.



Sediment Pond Design

Sediment Pond 003 will not be constructed as part of the Willow Creek Mining operation because of the construction of railroad tracks in the location it was proposed. Cyprus Plateau Mining Company (CPMC) will replace sediment control initially intended for this area by increasing the containment volume of Sediment Pond 12B. The designs for Sediment Pond 12A and 12B are found in Exhibit 13 along with the other sediment pond designs. Appendix A-3 of Exhibit 13 (formerly "Sediment Pond 003 Calculations") contains the hydrologic modeling for Sediment Ponds 12A and 12B. These ponds are designed to treat the 10-year, 24-hour storm runoff and sediment accumulations for three years.

Findings:

The operational hydrologic information for the railroad modifications package is complete and accurate.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Hydrology Maps

Analysis:

Many maps have been submitted as part of this amendment. Some of the maps are replacing and updating previous versions while a few are new to the plan. In many cases the updated maps are black and white versions of color originals. These maps are difficult to read because the color was often important in identifying different characteristics.

Findings:

The maps and plans are complete and accurate for the railroad modification package.

RECOMMENDATIONS

The hydrologic information provided in this amendment should be approved. Analysis on bank stability is reliant on the reviews completed by a Division Engineer.

blb
CC: Daron Haddock, DOGM Permit Supervisor
Pete Hess, DOGM Reclamation Specialist
Randy Harden, DOGM Reclamation Engineer
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