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April 12, 1989

TO: Sue Linner, Permit Supervisor

FROM: Rick Summers, Reclamation Hydrologist RPS

RE: Analysis of Sedimentation Pond Design (submitted February 3, 1989), Belina Mine, Valley Camp of Utah, Inc., ACT/007/001, Carbon County, Utah

SUMMARY:

The above referenced submittal was reviewed pursuant to UMC 817.46, 817.47 and 817.49. The submittal presents designs for sedimentation ponds 001A, 002A, 003A, and 004A. The submittal also presents peak flow values for undisturbed bypass drainage controls. The submittal does not contain specifics for the drainage controls (i.e. culverts and diversions). The methodology and assumption values for those peak flow values appear to be correct, however, complete review of the undisturbed bypass system will be more appropriate when the entire system designs are submitted.

The sedimentation pond designs are not adequate to demonstrate compliance with the above referenced regulations. The review section of this memo documents items that need to be addressed before review can proceed.

ANALYSIS:

The following items were noted in the review:

1. The application does not address the emergency spillway design for sediment pond 004A for stable passage of the 25 yr. - 24 hr. event down the embankment of the pond.

2. Embankment top width and sideslope requirements (subsections (l) and (m)) cannot be verified without the complete drawings of the ponds requested in R. Harden's review memo of March 13, 1989.

3. Design sediment volumes using U.S.L.E. methodology cannot be verified without details (map) of the subareas presented in Exhibit 1, pages 2 through 4 of 4.

4. Elevations for the 60 percent sediment volume removal requirement (subsection (h)) should be presented for each pond. The discussion should include methods (e.g. pond sediment stakes, surveying) that will be used to determine the volume of sediment in each pond.

5. The application should present plans to inspect the sedimentation pond as per subsection (t). A sample inspection form and commitment to inspect the ponds on a quarterly basis will demonstrate compliance with this regulation.

6. The submittal states that some values for the spillway designs were assumed (e.g. dimensions of emergency spillway at pond 004A). Weather conditions at the site will now allow accurate determination of spillway elevations and dimensions. These values should be checked and revisions made in the submittal as needed.

7. The sediment pond plans should include designs for energy dissapators at each spillway or justification for stability of existing discharge points without structures.

RECOMMENDATIONS:

Although it is recognized that some of the above items were not intended to be submitted with this review, the items were enumerated to inform the applicant of the remaining information required to demonstrate compliance with UMC 817.46, 817.47, and 817.49. This information should be submitted to the Division for continued review and approval.

cc: Mike DeWeese
Daron Haddock
6005R/102-103