



United States Department of the Interior
 OFFICE OF SURFACE MINING
 Reclamation and Enforcement
 BROOKS TOWERS
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 DENVER, COLORADO 80202

AUG 31 1984

MEMORANDUM

TO: Dave Maxwell, Project Leader
 Price River Coal Company, Utah

THRU: *Ron Singh* 8/31
 Ron Singh, Chief, Hydrology Support Branch

FROM: *Don Minges*
 Don Minges, Hydrologist, Hydrology Support Branch

SUBJECT: Field trip to Price River Coal Company (PRCC) to view sediment control structures and consult on U.S. Fish and Wildlife Service (USFWS) streamflow depletion estimate, August 22, 1984

Modifications to existing Hardscrabble Canyon sedimentation control structures were inspected as well as the newly constructed pond 009. Concerns expressed by the State relative to the modified slotted culvert installations across the haul road can be laid to rest since these installations will work as designed. The State's concern centered around the much smaller sheet inflow areas of the culverts. However, road crowning and banking will result in most sheet flow entering the road ditches thereby minimizing the volume of water to be intercepted by the slotted surface drains. With respect to culvert capacities, these are sufficient to route ditch flows to the respective ponds.

Drop-inlet spillway installations appeared adequate with the outflow from the most downstream spillway (pond 009) protected with adequate riprap. However, all other pond inflow and discharge points are inadequately protected from erosion. It was suggested to the company that a section of culvert be used at the pond 009 entrance to control headcutting of this very steep inflow point. Similar steep inflow points exist at all up-valley ponds but because they have been in place over a period of time, the inflow channels have stabilized somewhat.

Because the ponds work in series, the possibility of discharges exceeding regulatory requirement leaving the permit area appears reasonably remote. The danger appears to be from potential lessening of design capacities, especially with respect to the new pond 009, from sediment accumulation resulting from both headcutting and bank sloughing. This is something that should be checked during inspections and corrected by excavating to re-establish pond capacity where necessary.

The final approach used to arrive at net streamflow depletion for the mine appears to be the correct method. The average of actual diversions over a four-year period from 1980 to 1983 (43 acre-feet per year depletion) gives a reasonable estimate especially considering the range of annual coal productions included in that period. Most USFWS Windy Gap Process estimates are based on a summation of many individual item estimates of indirect losses. In this situation, however, the estimate is based on actual direct losses (diversions) from streamflow .

cc: Walter Swain - OSM
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