Skyline
ACT/007/005

May 7, 1987

TO: Technical File

FROM: Dave Cline, Reclamation Hydrologist DJC

RE: The Use of Protected Channels for the Conveyance of Disturbed Area Drainage that Reports to Sedimentation Ponds

The question of whether the regulations require that disturbed area diversions be protected from erosion by the use of rip rap or some other means has come up several times in the past year. Recently in a meeting with officials from the Skyline Mine it was indicated to the Division staff that Skyline would take the issue before the Board in order to get an interpretation of the regulations. The following is a justification for the requirement to protect disturbed area diversions and the need for the requirements of UMC 817.43 and UMC 817.45 to be met. It is by no means an exhaustive study of the regulations but simply a rationale of why I have required that disturbed area diversions be protected in my reviews. Hopefully, this information will be useful in the final decision of this matter.

Regulation UMC 817.43 is entitled Hydrologic Balance: Diversions and Conveyance of Overland Flow, Shallow Ground Water Flow, and Ephemeral Streams. The second sentence under the title states:

> "The folowing requirements shall be met for all diversions and all collection drains that are used to transport waters into water-treatment facilities and all diversions of overland and shallow ground water flow and ephemeral streams."

The second and in this sentence implies that the requirements apply to all diversions and all collection drains that are used to transport waters into water-treatment facilities and to something else. Upon examination of the rest of the sentence it is found that the something else is the exact title of the regulation. Therefore, it is obvious that the requirements of UMC 817.43 apply to diversions reporting to water-treatment facilities (disturbed area diversions) and to diversions of overland and shallow ground water flow and ephemeral streams.

Regulation UMC 817.45 is entitled Hydrologic Balance: Sediment Control Measures. The first sentence under this regulation states:

> "Appropriate sediment control measures shall be designed, constructed, and maintained using the best technology currently available to:
>
> (i) Prevent, to the extent possible, additional contributions of sediment to stream flow or to runoff outside the permit area,
> (ii) Meet the more stringent of the applicable State or Federal effluent limitations,
> (iii)Minimize erosion to the extent possible."

The second section of this regulation states:

> "Sediment control measures include practices carried out within and adjacent to the disturbed area."

From the above excerpts from the regulation it is clear that sediment control measures apply to both the disturbed area and to areas adjacent to the disturbed area. The regulation further goes on to list several examples of sediment control measures. Among these are:

> "(c) Retaining sediment within the disturbed areas;
> (e) Diverting runoff using protected channels or pipes through disturbed areas so as not to cause additional erosion;"

Section (c) states that sediment must be retained and sections (iii) and (e) above state that the operator must minimize erosion to the extent possible and not cause additional erosion. Trapping sediment in a sedimentation pond will not meet the requirements of these two sections. First, these two sections explicitly state that erosion must be minimized and not cause additional erosion. Secondly, once sediment is trapped in the pond it cannot be returned to its place of origin. The sediment will be mixed with coal fines, oil and grease, and other materials that are not suitable for use as a replacement material. Additionally, section (e) states that protected channels be used through disturbed areas so as not to cause additional erosion.

The above justification provides the rationale for the requirement to apply the requirements of UMC 817.43 and UMC 817.45 to disturbed area diversions. These justifications are interpretations made by the author and are not to be construed as representing all members of the hydrology staff.

cc: Lowell Braxton
Sue Linner
Rick Summers