

December 8, 1987

TO: File

FROM: Rick P. Summers, Reclamation Hydrologist *RS*

RE: Request to Delete Undisturbed Drainage Ditches from MRP (October 15, 1987), Utah Fuel Company, Skyline Mine, ACT/007/005, Carbon County, Utah

Summary

The operator proposes to delete undisturbed drainage ditches from the MRP. The proposal is based upon the following rationale:

- 1) No perceptible flow has been observed in the diversions. Evidence (twigs, etc.) in channel also indicates little flow.
- 2) Maintenance of the diversions will increase slope instability problems.
- 3) Reference to regulation UMC 817.43: "Overland flow, including flow through litter, and shallow ground water flow from undisturbed areas, and flow in ephemeral streams may be diverted away from undisturbed areas....., if required or approved by the Division as necessary....."

In Response

- 1) If we assume the diversion's existence for a period of four-five years, probability theory indicates only a 35% chance of a 10-year event occurring during that period. Without direct measurements of flows during that period, it is difficult for the Division to make

a justification based on observations (i.e., no observation of the diversions may have been made during the larger precipitation events, especially any 10 yr - 24 hr events (if they occurred). Additionally, in ephemeral systems, deposition of sediments and organic matter will occur during the recession limb of the hydrograph. In other words, when the flow ceases following an event, some matter will be deposited in the channel.

- 2) The diversions should not be constructed on unstable slopes (UMC 817.43 (d)): "No diversion shall be located so as to increase the potential for land slides and no diversion shall be constructed on existing slides unless approved by the Division". This concern will be addressed during the forthcoming five-year renewal and field tours.
- 3) Regulation UMC 817.43, introduction paragraph, reads in entirety:

"Overland flow, including flow through litter, and shallow ground water flow from undisturbed areas, and flow in ephemeral streams may be diverted away from disturbed areas by means of temporary or permanent diversions, if required or approved by the Division as necessary to minimize erosion, to reduce volume of water to be treated, or to prevent or remove water from contact with acid-forming and toxic-forming materials. The following 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 groundwater flow and ephemeral streams." (emphasis added).

The Division interprets the design requirements of this regulation to apply to diversions of undisturbed drainage. The Division can approve the proposal to delete the diversions only following a demonstration that the sedimentation pond is sized adequately to treat the predicted runoff from the undisturbed drainages. However, it should be noted that the undisturbed drainages would then report to the

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sedimentation pond and fall under the criteria of  
UMC 817.43: "The following requirements shall be met  
for all diversions and all collection drains that are  
used to transport water into water-treatment  
facilities....."

Recommendations

Do not grant approval for the proposal. Inform the operator that the proposal will be considered if the sedimentation pond(s) are demonstrated to be adequately sized to treat the predicted additional runoff.

jr  
cc: Randy Harden  
Wayne Hedberg  
Sue Linner  
Kent Wheeler  
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