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## State of Utah

DEPARTMENT OF NATURAL RESOURCES  
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June 9, 1989

TO: Richard V. Smith, Permit Supervisor

FROM: Tom Munson, Reclamation Hydrologist *TM*

RE: Culvert Extension, Co-Op Mining Company, Bear Canyon Mine,  
ACT/015/025-89B, Folder #2, Emery County, Utah

**Synopsis**

The plan to extend Culvert C8U and reorient Culvert C10U was received in the Division office on June 1, 1989.

**Analysis**

The two plates submitted show the location of Culverts C10U and C8U. The location of silt fence material in front of culvert C8U is not appropriate because on the plate it appears to block the culvert. The operator needs to discuss how the extension of this culvert will prevent the migration of coal fines into an undisturbed drainage.

The silt fence protecting the inlet to the culvert must be placed parallel to the culvert extension, running along the contour of the hillside to the north. This will help prevent coal fines from migrating down that hillside into the inlet. A berm to the south of the inlet will prevent drainage from the south from entering the culvert. These improvements must be shown prior to approval. The operator must also discuss how the headwall and trash rack will be installed on the extended culvert at the inlet to meet the requirements of the PAP.

Culvert C10U is shown on both plates, but is not listed on the table in Chapter 7 of the PAP summarizing culvert sizes. This information must be supplied. The operator must also be aware of the headwater conditions required for culvert C8U as listed in this summary table.

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Recommendations

1. The operator revise both plates to show proper placement of silt fence and berms for Culvert C8U as discussed in the analysis section.
2. The operator must supply an explanation of how the silt fence and berms associated with Culvert C8U will prevent migration of coal fines into an undisturbed drainage and how the new inlet will adhere to the technical specifications found in the PAP.
3. The operator must supply the necessary technical information to complete the summary of the culvert size table in Chapter 7 of the PAP for Culvert C10U.

djh  
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