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October 24, 1990

TO: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Tom Munson, Senior Reclamation Hydrologist *TM*

RE: Cottonwood Creek Culvert Extension, Beaver Creek Coal Company, Trail Mountain #9 Mine, ACT/015/009-90E, Folder #2, Emery County, Utah

### Synopsis

A response to the concerns spelled out in a September 13, 1990 memo from Tom Munson to Pamela Grubaugh-Littig was received by the Division October 11, 1990. This memo reviews this submittal.

### Analysis

The operator submitted the necessary cross-sections and photo documentation at four cross sections to document pre and post channel conditions. Installation methodology including methods to prevent additional contributions of suspended solids to the streamflow outside of the permit area during construction is also shown on a figure. (Note all figures must be certified and labeled.)

The culvert flow calculations have been reviewed by Jesse Kelley and will be addressed in a separate memo from him. All calculations appear to be correct.

### Recommendations

1. All figures and plates must be certified by a registered engineer.
2. The operator must submit updated sediment pond designs to reflect the additional drainage to the pond from both the fan portal and the culvert extension. (Note: See review for fan portal amendment.) Approval for the sediment pond enlargement must occur prior to culvert extension approval.

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