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DEPARTMENT OF NATURAL RESOURCES
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September 13, 1990

TO: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Tom Munson, Sr. Reclamation Hydrologist *TM*

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

Synopsis

The operator requests to extend the existing 66 inch CMP approximately 300 feet up the canyon. This memo reviews the operator's request received by the Division on September 4, 1990.

Analysis

The following items need to be completed prior to approval of this extension.

- Cross sections using one-foot contour intervals every 100 feet within the creek bottom and immediate flood plain.
- Photo documentation at each cross section location and upstream of the proposed inlet.
- Installation methodology including methods to prevent additional contributions of suspended solids to the streamflow outside of the permit area during construction.
- Incorporation of the additional disturbance in the bonding estimate and bonded area.
- Provide bonding calculations due to the added costs of installing 300 feet of reclaimed channel and removal of 300 feet of additional culvert.

Page 2
Memo to P. Grubaugh-Littig
ACT/015/009
September 13, 1990

- Provide a final drawing showing the slope of the extended culvert.
- Provide documentation that the sediment pond is sized to accept .471 acres of additional disturbed area drainage and what measures will be implemented for conveyance of the disturbed area drainage to the sediment pond.
- Provide details for reclamation of this portion of stream channel, including slopes and cross sections.
- Provide the proper culvert calculations to update the design found in Appendix 7.

Recommendation

This plan should not be approved until this information is submitted and approved.

djh
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