0009

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

February 17, 1998

Paige Beville, Manager
Environmental Health, & Safety
ARCO Coal Company
555 17th Street, Room 2170
Denver, Colorado 80202

Re: Bryner Canyon Culvert, Mountain Coal Company, Gordon Creek #2, #7, & #8, ACT/007/016-98A, File #2, Carbon County, Utah

Dear Ms. Beville:

The following analysis and findings support the Division's requirement to remove the culvert from the right fork of Bryner Canyon. This amendment should be revised to include reconstruction and stabilization of the channel to protect the caved area and pass all flows.

Please provide a revised amendment by now later than March 2, 1998.

Analysis

The analysis of this amendment considered the advantages and disadvantages of leaving the culvert in place. The main issue in doing so was to decide what best protects the channel beyond the bond period. Ultimately, the mandate the regulations has to be considered and followed according to the reclamation standards.

R645-301-761 requires that all temporary structures be removed. Considering the situation, could the culvert be considered a permanent structure? R645-301-100 specifies temporary and permanent hydrologic structures as diversions and impoundments, not mentioning culverts. The definitions of diversions and impoundments also appears to give the Division some latitude in approving permanent and temporary structures for post mining land use.

R645-301-542.620 requires removal of bridges and culverts unless approved for post mining land use. Clearly, any structure would have to have a designated need for being considered for post mining land use. In this case the culvert is needed to ensure that further subsidence of the channel does not take place. Its functional use would have to be at least equal to any alternative reclamation procedure. In this case, would removing the culvert and replacing it with a riprap channel provide the channel with the protection that the culvert provides?

Findings

The primary goal in classifying the culvert as either temporary or permanent is to ensure the channel is functional and stable through the bond release interim and into the future. Two factors determine if the culvert is suitable for classifying the culvert as permanent. One is its structural stability and the second is its intended and functional use in the future. Designs have been submitted to show that the culvert can pass large storm events. Its existence and function have been proven over the past 17 years.

However, culverts have a life expectancy and can become nonfunctional over time. Culverts require maintenance. Collapse, clogging or corrosion of the culvert render it non-functional. A damaged culvert can cause sever damage within the channel and allow flow to saturate the fill of the caved area. Therefore, this culvert cannot be considered a permanent structure.

This amendment is not recommended for approval. The culvert should be removed from the channel. The channel should be reconstructed and stabilized to protect the caved area and pass all flows.

Sincerely,

Joseph C. Helfrich
Permit Supervisor

tat
Enclosure
cc: Dave Darby, DOGM
O:\007016.GC2\FINAL\DEFICIEN.98A