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007/004 #2



JAN 18 1994

DIVISION OF  
OIL, GAS & MINING



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January 14, 1994

Mr. Randy Harden  
State of Utah  
Department of Natural Resources  
Division of Oil, Gas and Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

**SUBJECT: Exposed coal seams, Hardscrabble Canyon, Castle Gate Coal Mine,  
Carbon County, Utah. Permit No. 007/004**

Dear Randy:

Pursuant to the request of Richard Allison (Amax Coal West), I have recently evaluated the memo you sent to Mr. Allison on October 12, 1993 concerning the exposed coal seams in Hardscrabble Canyon. Subsequent to that evaluation, I discussed the memo with you on the phone on January 11, 1994. This letter summarizes our discussion and the status of addressing your concerns.

A coal seam was exposed long ago when the No. 4 Mine portal at the west end of the disturbed area in Hardscrabble Canyon was developed. The reclamation grading plan for Hardscrabble Canyon dictates that the coal seam remain exposed indefinitely. Your memo quoted the applicable federal and state regulations pertaining to exposed coal seams and requested that the issue be addressed in the permit documents.

The regulations require that coal seams be covered or treated to control adverse impacts to surface water, groundwater, plant growth, postmining land use, and prevent sustained combustion. It is my understanding that the coal seam can be left exposed if adequate justification is provided to support the claim that leaving the coal exposed will not adversely affect surface water, groundwater, plant growth, postmining land use, and will not allow for sustained combustion. The potential of the coal to leach acid or toxic forming materials to the soils at the base of the cut slope will be determined by performing specific laboratory tests. Possible tests include those listed in the permit documents under section 3.3-4(1), Resoiling. The potential for sustained combustion will be evaluated by considering the self-extinguishing characteristics of the coal in the coal seam.

At the close of our conversation, we discussed the primary reason why the coal seams have been proposed to be left exposed. Specifically, there is an insufficient amount of fill material to cover the coal seam with 4 feet of soil and slope the backfill to a grade of 2:1. In addition, filling the upper end of the canyon to adequately cover the coal would increase the gradient of the reclamation diversion running through the center of the canyon. As you know, steep diversions constructed on fill are not desirable because of the increased potential for erosive failure.

Mr. Randy Harden  
January 14, 1994

Castle Gate Coal Mine  
Hardscrabble Canyon

I have developed a testing plan to determine the acid and toxic material forming potential of the coal. I will insure that your soil specialist at the Division approves of the testing plan prior to sampling. Samples will then be collected, analyzed at the laboratory, and the results evaluated. A permit amendment (insignificant permit revision) will be submitted to update the permit documents accordingly.

Please call if this procedure to address the exposed coal seams in Hardscrabble Canyon does not meet with your approval.

Sincerely,



William S. Hendrickson, P.E.  
Civil Engineer

cc: Richard Allison, P.E. (Amax Coal West)