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1407 West North Temple  
Salt Lake City, Utah 84140

ACT/OIS/OIG  
#2

May 24, 1989

Mr. Richard Smith  
Permit Supervisor  
State Department of Natural Resources  
Division of Oil, Gas and Mining  
355 West North Temple  
3 Triad Center, Suite 400  
Salt Lake City, Utah 84180-1204

**RECEIVED**  
MAY 30 1989  
DIVISION OF  
OIL, GAS & MINING

SUBJECT: Cliff Escarpment Study Update

Dear Mr. Smith:

On May 16, 1989 a meeting was held at the U.S. Forest Service offices in Price, Utah. The meeting was held to discuss the Cliff Escarpment Study on the south lease of UP&L's mining operations at East Mountain near Huntington, Emery County, Utah. The discussion concerned the geotechnical computer modeling which has been conducted by the Bureau of Mines Research Center in Denver, Colorado and the University of Utah in Salt Lake City, Utah.

Attached is a list showing those in attendance. Representatives from the Bureau of Mines and University of Utah each gave a presentation of the work which they are performing. The Bureau of Mines has been using the boundary element and discrete element methods of modeling while the University has been using the finite element method.

Enclosed are copies of reports submitted to UP&L by the Bureau and University of Utah. They describe the work which has been done and general conclusions to date. It is very important to note at this point that both groups felt that it is much too early to draw any conclusive conclusions and that more study is needed.

UP&L plans to begin mining in the 8th East panel during mid to late-June 1989 and the 9th East panel will be mined later in 1989. Survey monitoring locations have been installed on the 8th East panel and will be installed on the 9th East panel later this summer. All monitoring points are in agreement with the Bureau and University representatives working on the study.

UP&L plans to drill two holes on East Mountain this summer. Cores will be taken from various formations. These cores will then be tested for material strengths. It is planned to test the cores at the University of Utah in conjunction with the Division of Oil, Gas and Mining Rock Materials Study. It is planned to continue working with the Bureau of Mines and University of Utah during the next year on computer modeling of the mining panels in the study area.

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Research relating to vegetation and wildlife has been conducted by UP&L representatives in association with government agencies. Mr. Val Payne of the UP&L Mining Division has been monitoring eagle and other wildlife habitats in the south lease area. This has included on-site visitations on the ground and in helicopters. This effort will also continue through the next year.

It is requested that the agencies involved in this study write to:

Mr. Fred Allgaier  
Bureau of Mines  
Denver Research Center  
P. O. Box 25086  
Building 20, Denver Federal Center  
Denver, Colorado 80225  
Telephone: 1-303-236-0720

in support of the work and effort which has been done. This will aid him in developing further funding for the study.

A sheet is attached to be signed which acknowledges your agreement in the study effort to date and continued plans. If you have any questions please call.

Sincerely,



David Smaldone  
Director of Permitting,  
Compliance & Services  
Mining Division

DS:bb:6254  
Enclosure

cc: Carter Reed, USFS  
Brent Northrup, Bureau of Mines  
Fred Allgaier, Bureau of Mines  
W.G. (Bill) Pariseau, University of Utah  
Brett Harvey  
Dee Jense  
Dan Baker  
Val Payne  
Gary Takanaka  
Bart Hyita