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STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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November 27, 1984

Office of Surface Mining
Western Technical Center
Brooks Towers
1020 Fifteenth Street
Denver, Colorado 80202

Attention: Mr. Bill Kovacic

Ladies and Gentlemen:

RE: Additional Technical Information, Utah Power & Light
Company, Deer Creek Mine, ACT/O15/O18, #2, Emery County,
Utah

During the November 2, 1984 meeting between the Office of Surface Mining (OSM) and the Division, several technical areas of concern regarding the Deer Creek Mining and Reclamation Plan (MRP) were brought to light. As this MRP is currently being reviewed and undergoing in-depth technical analysis at this time, the Division will herein summarize those technical concerns raised during our November 2 meeting in order that these may be brought to the attention of Utah Power & Light Company (UP&L) and in some way resolved prior to permit approval. These concerns are as follows:

Ground Water

The Division regards information given in the Deer Creek MRP to be inadequate for the purpose of characterizing the East Mountain ground water regime as per UMC 783.15. The MRP should include previously collected borehole water data and a proposal and commitment to systematically collect and analyze additional borehole data with particular emphasis towards delineating the Star Point-Blackhawk aquifer system and identifying other localized aquifers, if encountered. Acquisition and analyses of these data will allow a more accurate assessment of the probable hydrologic consequences of mining as per UMC 784.14. For example, cumulative dewatering impacts (life-of-mine and beyond) to ground water divides, piezometric surfaces, recharge

of the Star Point-Blackhawk aquifer system and base flow recharge to perennial streams may be more realistically evaluated and the need for mitigative measures addressed, if necessary (UCA 40-10-29).

Subsidence

The perennial status of Whetstone Creek, Meetinghouse Creek, Left Fork of Rilda Creek and Right Fork of Rilda Creek cannot be ascertained until the applicant has provided information required by UMC 783.16 in the Deer Creek MRP.

Buffer zones designed to restrict subsidence by utilizing room and pillar mining methods with the retention of pillars have been proposed for the protection of Left Fork of Rilda Canyon, Right Fork of Rilda Canyon and the Huntington power line corridor. Detailed barrier pillar design information must be presented in the MRP for the purpose of determining the extent of mining induced subsidence and whether these areas will sustain material damage as per UMC 817.126. Listed below are additional data necessary to achieve the above determination.

1. Pillar strength and safety factor values.
2. Angle of draw calculation.
3. Calculations utilized to derive pillar dimensions.
4. Anticipated rate of pillar collapse.
5. A map (or maps) that delineates pillar locations, haulageways and cross-cuts and the attendant surface projection of buffer zone boundaries.

Sequences of longwall mining and associated subsidence are described for Deer Creek. Inasmuch as the applicant has proposed to subside areas beneath and adjacent to this perennial stream, approval for mining requires a regulatory authority determination as described under UMC 817.126. The applicant must submit detailed subsurface information allowing the regulatory authority to determine whether material damage will occur to this perennial stream. Moreover, should data provided under UMC 783.16 result in perennial stream designations for Whetstone and Meetinghouse creeks, then accordingly, the regulatory authority will be obligated under UMC 817.126 to conduct additional subsidence buffer zone determinations.

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Information given in the MRP indicates the Castlegate Sandstone does not overlie projected workings (room and pillar, longwall) in the Rilda Canyon area of the Deer Creek Mine. This area is characterized by moderate to steep slopes and variable overburden thicknesses. The above factors suggest that, for this area, unplanned subsidence is more likely to occur and, therefore, the surface is at higher risk to experience material damage. Additional data and justification must be provided to allow the regulatory authority to determine that the applicant is in compliance with UMC 817.121(a) and UMC 817.97(a). Moreover, the applicant must provide a commitment to mitigate potential damage to critically valued raptor nesting habitat that may be impacted by subsidence as required by UMC 817.97(d)(4).

An additional concern which was not discussed during the meeting, but which was previously discussed during a phone conversation between Lou Hamm (OSM) and Mary Boucek (DOGM), pertains to the accessibility to Leases U-06039, SL-051221 and U-024317 in the northern portion of the designated permit area. The question arises regarding access since these leases are not immediately contiguous to the main permit area currently being mined. This should be discussed in the MRP, if not adequately addressed to date, or these leases should be excluded from the permit area.

The Division appreciates the opportunity to provide input into the on-going review process for this mine and is anticipating a timely resolution of the above concerns. Should you or your staff have any questions, please contact the Division at your convenience.

Best regards,



Dianne R. Nielson
Director

MMB/btb
cc: Barbara Roberts
Ron Daniels
Mary Boucek
Pam Grubaugh-Littig
Rick Smith
John Whitehead

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