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United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202

OCT 18 1984

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DIVISION OF OIL
GAS & MINING

Dr. Dianne Nielson, Director
Division of Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

Dear Dr. Nielson:

The Office of Surface Mining (OSM) has reviewed the final technical analysis (TA) and State Decision Package, Southern Utah Fuel Company (Sufco), Convulsion Canyon Mine, received in this office August 7, 1984.

There are several issues remaining in this proposed permit approval which appear to be in conflict with the requirements of the approved Utah Regulatory Program. Most of these issues have been discussed previously with Division employees. The specific problems associated with the Division's proposed permitting action and the applicant's unapprovable stream channel reclamation submittal were discussed in a meeting among your staff, yourself, and Steve Manger and Walter Swain of the OSM Utah Task Force on July 25, 1984.

The Division has stipulated compliance with UMC 817.44. The basic technical approach to resolving the permanent reestablishment of the stream channels in the surface facility area seems to be reasonable, if not exhaustive. The proposed sequence of submittals from the operator, review and approval or enforced design imposition by the Division, is also reasonable. However, the issuance of a permit prior to completion of this process is not in accordance with the Utah Regulatory Program.

The Bathurst method, as described in OSM's diversion manual, uses a series of curves which end at 600 cubic feet/second (cfs). The 100-year, 24-hour flow event for the reclaimed channel is 1250 cfs, and for very steep slopes, as identified in the Sufco permit application package (PAP), the Bathurst curve ends at 150 cfs. Therefore, the available sizing criteria for the appropriate riprap was not precise. However, it did allow for professional judgement that the sizing is not adequate. Sufco also has failed to present detailed procedures for placement of the riprap. Therefore, the channel design as presented cannot be approved, and we suggest that Sufco look at other design alternatives to assure long-term channel stability across the fill.

OSM believes that the following approach would allow the regulatory authority to approve the PAP as submitted.

The total bond amount must include the third party costs for removal of the maximum amount of fill material to accomplish two ends. First, to reduce the remaining slopes of the reclaimed stream channels to achieve minimal flow velocities, and second, to maintain side slope stability in the canyon. Once this is

determined, the regulatory authority would have to develop detailed stream channel reclamation plans that would be imposed on Sufco prior to permit approval. The regulatory authority may develop basic designs for stream reestablishment and site reclamation with a final bond amount based on those designs. Alternative reclamation and design requirements could include in combination and to differing degrees some of the following:

1) Removal of predetermined quantity of fill material to minimize peak flow velocities and to maximize side slope stability.

2) Inclusion of any number or types of stream flow energy dissipators to reduce maximum flow velocities.

3) Construction of check dam structures.

Section UMC 817.72(d) restricts construction of stream diversions over fill material. The Regulatory Authority must show by precise engineering and geomorphic analysis that removal of all the fill material would increase the risk of side slope failure and that a trade-off of allowing some fill to remain to increase stability of the side slopes is the most environmentally advantageous avenue to follow.

The absence of any approvable final reclamation plan does not allow the regulatory authority to make the required finding that the PAP is complete and accurate, (UMC 786.19(a)); the finding that reclamation is feasible (786.19(b)); the finding that the operations proposed under the application have been designed to prevent damage to the hydrologic balance outside the proposed mine plan area (786.19(c)); and the finding that the bond is adequate (786.19(k)).

If you have any questions regarding the points raised in this letter, please contact Walter Swain or Ron Naten at (303) 844-3806.

Sincerely,

Richard E. Dawes

for Allen D. Klein
Administrator
Western Technical Center