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STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

ACT/041/002
#

Norman H. Bangert, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

November 26, 1986

Mr. Rick Holbrook
Senior Project Leader
Office of Surface Mining
Western Technical Center
Brooks Towers, 1020 15th Street
Denver, Colorado 80202

RICK

Dear Mr. Holbrook:

Re: Concerns of U.S. Forest Service Regarding Subsidence in
Quitcupah Creek, Southern Utah Fuel Company, Convulsion Canyon
Mine, ACT/041/002, Sevier County, Utah

Enclosed is a copy of Southern Utah Fuel Company's November 11, 1986 letter addressing concerns raised by the Forest Service (October 14, 1986) regarding possible subsidence resulting from mining under Quitcupah Creek. The enclosed letter was generated after a meeting between Southern Utah Fuel, Division of Oil, Gas and Mining and representatives of the Manti-LaSal National Forest, held on November 7, 1986 in the Manti-LaSal National Forest offices.

The commitments made by Southern Utah Fuel Company in this letter were verbally reviewed by DOGM and the Forest Service on November 7 and at that time, satisfactorily alleviated the concerns of both the U.S. Forest Service and the Division of Oil, Gas and Mining. Formal acceptance of this letter by the U.S. Forest Service should facilitate final approval of the Convulsion Canyon Mine plan. Should additional information be required, please advise.

Sincerely,

Lowell P. Braxton
Administrator
Mineral Resource Development
and Reclamation Program

djh
Enclosures
cc: B. Boley, Manti-LaSal Nat'l Forest
S. Linner
0799R/59

Ken Payne
Vice President & General Manager

Subsidiary of
Coastal States
Energy Company



**Southern Utah
Fuel Company**

P.O. Box P
Salina, Utah 84654
(801) 529-7428
(801) 637-4880 (Mine)

Mine file
S. Linner

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DIVISION OF
OIL, GAS & MINING

November 11, 1986

Mr. Lowell Braxton
Administrator
Department of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Mr. Braxton:

Mr. Boley of the Manti-LaSal National Forest expressed concern about Southern Utah Fuel Company's mining activity under Quitchupah Creek on our fee lease in his October 14, 1986 letter to Mr. Holbrook. A copy of the letter is enclosed. Our mining activity under the creek has been limited to main entry development for access to production areas. The stream cross-unders were designed to prevent subsidence of the stream using sound engineering design methods. These methods are set forth in the 1983 Completeness Response, Volume 8 of our PAP starting on page 53.

The unexpected subsidence that occurred under the west escarpment of Quitchupah Canyon was experienced in production panels. Support pillars left in these production panels were 14-16 feet in height as opposed to the 8-9 feet high pillars left where Quitchupah Creek was crossed under. The cross-sectional area of the pillars left under Quitchupah Creek is at least twice as big as the cross-sectional area of the pillars in the production panels. This means that the pillars left underneath Quitchupah Creek have safety factors 3 to 4 times greater than those pillars in the production panels that failed.

Southern Utah Fuel Company monitors the stream flow of Quitchupah Creek as part of its hydrologic monitoring program. Flows of the stream above and below the permit area are measured. This data is submitted to the regulatory authority annually.

Mr. Lowell Braxton
November 11, 1986
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Subsidence monitoring above the mine is done using photogrammetric methods that meet the needs of the surface management agency. This monitoring will be used to cover Quitchupah Creek in the areas where access entries are driven under the creek, such as the 4 East submains. This monitoring may also be supplemented with monitoring of conventional surveying monuments and/or underground convergence measurements in the cross-under area, if deemed necessary by the applicant. The level of monitoring will be reviewed at permit renewal intervals (5 years) and will be modified if necessary to assure adequate data is being collected.

With the large safety factor designed into the pillars in the stream cross-under areas, the likelihood of pillar failure is very remote. If the stream was to be interrupted, it would be by the failure of the entries particularly at intersections. Before the area is abandoned, a plan will be submitted to the regulatory authority for approval. This plan will utilize the best feasible technology to provide for maintaining the integrity of Quitchupah Creek.

Sincerely,
SOUTHERN UTAH FUEL COMPANY



Ken Payne
Vice President and General Manager

WKS:cfc

Enclosure