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Ken Payne
Vice President & General Manager



**Southern Utah
Fuel Company**

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Subsidiary of
Coastal States
Energy Company

Mine file
S. Linnas

ACT/041/002

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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.

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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

Rec
10-16-86

United States
Department of
Agriculture

Forest
Service

Manti-LaSal
National Forest

599 West Price River Dr.
Price, Utah 84501

Reply to: 2820

Date: October 14, 1986

Richard Holbrook
OSM - Reclamation and Enforcement
Brooks Towers
1020 15th Street
Denver, Colorado 80202

Dear Mr. Holbrook:

In our letter to Ron Naten, dated July 23, 1986, we stated that three concerns needed to be resolved before the Manti-LaSal National Forest would consent to approval of Southern Utah Fuel Company's (SUFCO) Convulsion Canyon Mining and Reclamation Plan. The concerns are as follows:

1. The integrity of Quitchupah Creek must be maintained downstream from the private property where undermining of the creek has taken place.
2. The escarpments of Quitchupah Creek must be protected from subsidence or failure.
3. Southern Utah Fuel Company must establish a subsidence monitoring plan that meets the needs of the Forest Service and the intent of the regulations.

Please refer to our letter addressed to Meg Estep, dated September 9, 1986, which was in response to SUFCO's PAP modification, dated June 23, 1986, regarding subsidence control and monitoring. In this letter, we consented to the subsidence control and monitoring plan (items 2 and 3) subject to several conditions which were discussed. This left item 1 yet to be resolved.

THE PAP modification discusses that a "buffer Zone," provided by support pillars will ensure that the flow in Quitchupah Creek will not be disrupted. After consulting with the BLM and SUFCO, we feel that the "buffer zone" may protect Quitchupah Creek for the life of the mine and for some undetermined time after the mine is closed. We are, however, concerned about long-term subsidence and related effects after mining is completed and the workings are abandoned.

Some unexpected subsidence has already occurred under the west escarpment of Quitchupah Canyon in the "No Subsidence Zone" which, according to SUFCO, is due to water seepage into the mine and collapsing of the support pillars. This indicates to us that there is potential for this to also occur under the creek.

Positive measures must be planned to provide for adequate continuous support under Quitchupah Creek to prevent significant subsidence in the long-term after the mine is abandoned.

If you have any questions, please let us know.

Sincerely,

/s/ William H. Boley

for
REED C. CHRISTENSEN
Forest Supervisor

cc:
Dr. Nielson (Utah Division of Oil, Gas and Mining
K. Frame (SUFCO)
Fishlake N.F. (S.O.)
D-2
C. Reed