



0022  
 STATE OF UTAH  
 NATURAL RESOURCES  
 Oil, Gas & Mining

ACT/041/002  
 File #2

Norman H. Bangerter, 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

April 26, 1988

Mr. Ken Payne, General Manager  
 Southern Utah Fuel Company  
 P. O. Box P  
 Salina, UT 84654

Dear Mr. Payne:

Re: Permit Conditions, Southern Utah Fuel Company, Convulsion Canyon Mine, ACT/041/002, File #2, Sevier County, Utah

Southern Utah Fuel Company's (SUFCO's) February 29, 1988 response to outstanding permit conditions UMC 817.52-(1)-DD and USFS 3 has been reviewed. The Division finds that the concerns of UMC 817.52-(1)-DD have been adequately responded to by further documentations of SUFCO's existing ground water monitoring program. A technical memo detailing the review is attached. The additional monitoring information and maps which were submitted in response to this condition should be made a part of the Mining and Reclamation Plan upon reorganization of the plan later in this permit term.

The response to USFS 3 was reviewed by Manti-LaSal National Forest and found to be inadequate. A copy of the letter documenting their additional requirements is attached.

Please respond to the Forest Service's concerns by June 1, 1988. Feel free to contact the Forest Service directly for clarification, but all future submittals should come through this office. Don't hesitate to contact me if I can provide any assistance.

Sincerely,

*Susan C. Linner*  
 Susan C. Linner  
 Reclamation Biologist/  
 Permit Supervisor

jr  
 Attachments  
 cc: G. Morris  
 D. Haddock  
 0028R/69



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April 25, 1988

TO: File  
FROM: David W. Darby, Geologist <sup>SEE FOR</sup>  
RE: Permit Condition UMC 817.52-(1)-DD, Southern Utah Fuel Company, Convulsion Canyon Mine, ACT/041/002, Folder #2, Sevier County, Utah

Summary

Stipulation UMC 817.52-(1)-DD was attached as a special condition to Southern Utah Fuel Company's (SUFCO) mining permit, which required the operator (SUFCO) to implement an in-mine ground water monitoring program. This stipulation was deemed necessary to supplement ground water information presented in the mine plan. Accountably, large volumes of ground-water discharge (1038 gallons per minute, (gpm)) from the mine and extensive fracturing within the region indicated that hydrologic processes were taking place that were not being reflected in the data and conclusions presented by the operator.

The Blackhawk Formation which surrounds the mine exhibits an extensive joint system. Theoretically, the joint system could limit the zone of influence around a monitoring well. While keeping this theory in mind, and evaluating the monitoring plan, it is conceivable that the data obtained is not a true reflection of the ground water regime surrounding the mine site.

Initially, ground water information presented for review was derived from a few springs and six wells. During a meeting on August 11, 1987, SUFCO identified another seven wells that were being used for ground water monitoring.

In light of the information presented during the meeting (August 11, 1987) by SUFCO, a decision was reached whereby SUFCO

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would summarize all ground water information in a report. In accordance with our agreement, the report was to demonstrate that the use of ground water monitoring wells is sufficient to identify and characterize ground water conditions on and adjacent to the mine site.

SUFCO submitted the ground water summary report titled, Hydrological Assessment 1977-1987, on September 28, 1987. A review of the report concluded that there was insufficient information to show that the wells reflected the effects of mining on the ground water regime.

In a meeting held on February 9, 1988, Keith Welch presented new information that indicated a relationship between water levels in some wells and the sequence of mining. Additional maps (used by Keith) were submitted to the Division on February 29, 1988. These maps illustrated the sequence of mining from 1978 to 1987 and identified the location of all thirteen (13) ground water monitoring wells. The dates showing mining sequence coincided with water level fluctuations in monitoring wells.

As a result of the information presented at the meeting, the Division concludes that the ground water wells on the mine site are reflecting ground water changes. Future monitoring of ground water via monitoring wells will indicate the pragmatic use of the monitoring well system. This system will require modification as mining progresses, which the operator has committed to.

#### Recommendation

Based on the information presented by the operator during the meetings on August 11, 1987 and February 9, 1988, and on information submitted February 29, 1988 that reflects ground water changes during mining, I recommend that Stipulation 817.52-DD be considered satisfied.

jr  
cc: J. Helfrich  
S. Linner  
1299R/68:69

United States  
Department of  
Agriculture

Forest  
Service

Manti-LaSal  
National Forest

599 West Price River Dr.  
Price, Utah 84501

Reply to: 2820

Date: March 30, 1988

Lowell Braxton  
State of Utah Natural Resources  
Division of Oil, Gas and Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

RECEIVED  
APR 04 1988

DIVISION OF  
OIL, GAS & MINING

Dear Lowell:

We have reviewed Response to Condition USFS, Southern Utah Fuel Co., Convulsion Canyon Mine, ACT/041/002, Folder #2, Sevier County, Utah.

In the response, Southern Utah Fuel Company (SUFCO) states that mining under Quitchupah Creek will be done in such a manner as to leave adequate support pillars such that the perennial stream will not be disrupted.

As stated in our responses on the Five-Year Permit Renewal, we are concerned about the long-term integrity of the creek after the mine is abandoned. In SUFCO's November 11, 1986, letter to your office, in the last paragraph, it is stated:

"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."

This statement needs to be made in the Mine Plan.

In addition to this statement, SUFCO must also make a commitment to provide a plan for mitigating the effects to Quitchupah Creek in the event that the flow in Quitchupah Creek is adversely affected by subsidence and surface cracks during the life of the operation. This plan, as well as the plan discussed in the paragraph above, will be subject to approval of the regulatory authority and the Forest Service. The response does not discuss such a plan.

In our review of the response, an inconsistency between Map 80-10B in the Mine Plan and the 1987 subsidence maps included in the 1987 subsidence report was discovered. The subsidence maps have correctly identified the east escarpment area of Quitchupah Canyon as a non-subsidence area. Map 80-10B needs to be corrected.

If you have any questions, please contact the Supervisor's Office in Price, Utah.

Sincerely,

A handwritten signature in cursive script, appearing to read "G. A. Morris".

*for* GEORGE A. MORRIS  
Forest Supervisor