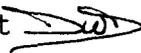


FILE COPY

August 11, 1986

TO: File

FROM: David W. Darby, Geologist 

RE: Change in Mining Sequence and Methods, Convulsion Canyon, ACT/041/002, File #2 and #3, Sevier County, Utah

CONCLUSION

The hydrologic and geologic aspects of Southern Utah Fuel Company's (SUFCO) proposal to mine beyond the escarpment of Quitchupah Canyon, please) have been reviewed by the Division. Proceeding with this proposal should not cause significant or adverse impacts to the hydrologic or geologic regime other than aesthetic implications.

PROPOSAL

SUFCO submitted a proposal to change mining methods and modify the subsidence zone along the canyon escarpments adjacent to Quitchupah Creek. This change in extraction methods will result in full extraction mining beneath the escarpment and a yield of an additional 132,000 tons of coal.

In proposing these changes SUFCO is requesting to subside areas along the escarpment. Based on past experience, it is expected that subsidence in these areas will cause tension cracks, rock falls or landslides.

SUFCO has submitted a subsidence monitoring program and addressed mitigation measures which will be used to protect renewable resources above the escarpment rim. However, major effects are not expected in the newly proposed mining areas. The escarpments are not recharge or discharge areas for groundwater aquifers or springs. A major portion of the new mining lies beneath the escarpment where the slopes are too steep for cattle grazing or large wildlife species to inhabit. Fracturing or rock falls that could occur will tend to blend in with the natural surroundings.

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Some adverse effects that could occur from this subsidence are changes in the aesthetics and a potential of damaging or taking raptor nests from fracturing or cliff spawling. These potential effects should be reviewed by the U.S. Forest Service, U.S. Fish and Wildlife Service and the Division's Biologist.

Should subsidence fractures or other undetermined effects develop the operator will have to implement mitigating measures as committed to in the mine plan.

Subsidence along the escarpment should not cause major adverse effects to the hydrology regime. Buffer zones have been established where secondary mining will not take place for protection of stream channels. However, there is a chance that the rock fail on the eastern part of the canyon will reach the stream channel even though it is a distance of 450 feet or more from mining activity.

Wess Sorensen was contacted by phone on July 31, 1986. In our conversation he (Wess) said there was a chance that rock slides could reach the stream channel, although no rock slides occurring thus far had reached the stream channel.

RECOMMENDATIONS

The applicant should implement a raptor study along both sides of Quitchupah Canyon where mining is proposed, and evaluate the effects subsidence (cliff spawling and fracturing) will have on raptors. Prior to conducting full pillar extraction along the eastern side of Quitchupah Canyon, SUFCO should first be required to evaluate the effects of full pillar extraction that will take place along the western escarpment of Quitchupah Canyon.

djh
cc: Dave Cline
Sue Linner
0798R-27