0004

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

February 10, 1995

TO: Daron Haddock, Permit Supervisor

FROM: Wayne H. Western, Reclamation Engineer WHW

RE: Midterm Review, Southern Utah Fuel Company, Convulsion Canyon Mine, ACT/041/002, Folder #2, Sevier County, Utah

RECLAMATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: **R645-301-760**

Analysis:

A generalized description of the hydrologic reclamation plan is provided in the SUFCO Mining and Reclamation Plan (MRP), Section 7.60. A detailed reclamation plan for all disciplines is found in Section 5.40.

Section 7.60 says that all culverts will be removed in reclamation and permanent diversions will be maintained. Siltation structures will be removed according to the approved time table. The East Spring Canyon sediment pond will be removed prior to regrading of the area. Interim sediment control will be established as discussed in Section 5.40. The structure removal time table is found in Figure 5-2. Wells will be capped, sealed and backfilled when no longer needed.

Figure 5-2 shows that the sediment ponds will be removed after interim sediment control measures have been established. The land will then be regraded and, while grading and compacting is proceeding, the diversions will be constructed. Beginning on page 5-57 there is a section on sediment pond removal and interim sediment control. This section says that the sediment pond must be removed first to make room for the main reclamation channel. Straw-bale dikes will be installed as interim sediment control in field determined locations that reduce runoff sediment.

Plate 5-2 and Plate 5-3, Table 5-5 and Appendix 2-4 have the location and the designs for the reclamation channels. The main channel runs from East Spring Canyon and Mud Springs Hollow above the mine site to East Spring Canyon below the site. The inlet is designed to collect sediment due to an abrupt slope change at that point. East and west collector channels are also proposed. The main channel will be placed on bedrock and then

grouted to avoid erosion of the channel bed. The main channel will discharge into a stilling basin downstream from the sedimentation pond. The collector channels will be constructed mostly on bedrock, although the west channel will cross some fill material. The reach based on fill will be protected with riprap and filter fabric. Two intercept channels (designs found in Appendix 2-4) will be constructed on the regraded southern slope to act as a slope break, decreasing the potential for erosion on that slope.

Findings:

The time schedule for reclamation is clearly listed in Table 5-5. Plans and designs for the final reclamation drainage are complete in Section 5.40 and in Appendix 2-4; however, the interim sediment control is left without complete designs. The text of the plan says that straw-bale dikes may be used as sediment control during the period that vegetation is establishing. There is no plan that shows all areas and the required treatment for sediment control. SUFCO should expand upon the design for their interim sediment control measures designs and show that all areas will be adequately treated after the pond is removed.

RECOMMENDATION

The reclamation plan for the Convulsion Canyon mine is lacking in the completeness of interim sediment control designs. The plan says that straw-bale dikes may be used and show installation designs, but it does not show the areas that will be treated and it is implied that some areas will not be treated. The sediment pond will be removed early in the reclamation period which makes it important that the proper sediment control is planned and designed.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: **R645-301-800.**

Analysis:

When practical the Division reviews the bond calculations during the midterm review. While reviewing the Convulsion Canyon Mine bond, the Division discovered that some unit prices were incorrect. The unit price for concrete was in dollars per square yard while the volume of concrete was reported in cubic yards. Some reclamation procedures, such as off-site disposal, were not included in the bond calculations.

While updating the bond the Division will correct the unit costs and including the missing items into the reclamation bond. The updating of the reclamation costs will increase the bond amount. The Division has informally contacted the Operator about the bond

deficiencies. During the bond conference the Operator agreed that some unit costs are wrong and to include the missing items. The Division is currently revising the reclamation cost estimate. When the review is complete, the Division will request the Operator to adjust the bond.

Findings:

The Division has found deficiencies in the reclamation bond calculations. Currently the Division is working on correcting and updating the bond calculations. When the new bond amount has been determined the Division will notify the Operator and request that he adjust the bond amount.

SUFBOND.WHW