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TO: Daron Haddock, Permit Supervisor

FROM: Steven M. Johnson, Reclamation Hydrologist *SMT*

RE: Draft Review, Mid-Term Permit Review, Convulsion Canyon Mine, Southern Utah Fuel, ACT/041/002, Working File, Sevier County, Utah ^{#2}

SYNOPSIS

A review of the hydrologic reclamation plan for the Southern Utah Fuel Company's (SUFCO) Convulsion Canyon mine was completed as part of the mid-term. The first review shown that there were some technical deficiencies in the reclamation plan. In April 1995 SUFCO submitted an amendment to there plan to address these deficiencies. The technical analysis of the rrrrrrreclamation plan and the amendment is included in this memorandum.

ANALYSIS

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 which 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 reclamation plan is complete and accurate. The time schedule for reclamation is clearly listed in Table 5-5 and in Section 5.40. Plans and designs for the final reclamation drainage are complete in section 5.40 and in appendix 2-4. The text of the plan says that straw-bale dikes may be used as sediment control during the period that vegetation is establishing. Text on page 5-58 has been changed to clarify the interim sediment control measure.

RECOMMENDATION

The amendment submitted as a response to the midterm review is sufficient in addressing the hydrologic concerns brought about in that review. This amendment should be approved as it is.