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TO: File

THRU: Daron Haddock, Permit Supervisor

FROM: Sharon Falvey, Senior Reclamation Hydrologist *SKE*

RE: Surface Facilities, Sediment Traps November 1, 1993 Amendment 93-K, Utah Fuel Company, Skyline Mine, ACT/007/005-93K, Folder #2, Carbon County, Utah

SUMMARY

This memo analyzes the submittal received on November 1, 1993, revised September 10, 1993. The submittal includes a rock storage site at the south edge of the coal stockpile and proposed Sediment Storage Traps 1 through 4 to be placed within the disturbed area. The operators proposed sediment traps are supplementary sediment control measures. However, the operator has not provided designs for these structures. The operator has also included the addition of a 15 " culvert to the pond on the north side, which was not identified or designed within the proposal.

TECHNICAL REVIEW

Proposal:

The operators amendment includes a rock storage site at the south edge of the coal stockpile and removes the delineation of a coal pile access road. The operator has included proposed sediment storage traps to be placed within the disturbed area. Sediment trap sketches are included in drawings for Volume 5, Section 1 pages 8/1 through 8/8. Sediment trap 1 receives drainage from DD-8 and is located at the Load Out Facilities south and east of the topsoil pile. Previously, this area has included the use of straw bales to retain sediment. Sediment trap SW-2 is located on the east edge of the upper minesite pad and receives drainage from Swale SW-2 and reports to a 24 inch culvert. Sediment trap 4 and sediment trap 3 are in the lower pad area near the sediment pond.

Analysis:

R645-301- 711.300. Requires the plan to describe "the methods and calculations utilized to achieve compliance with hydrologic design criteria and plans given under R645-301-740".



R645-301-742 defines sediment control measures to include vegetative sediment filters, dugout ponds and other measures that reduce overland flow velocities, reduce runoff volumes or trap sediment and include practices carried out within the disturbed area used singly or in combination. R645-301-742.110 requires that appropriate sediment control measures will be designed, constructed and maintained using the best technology currently available. Therefore, the operator must provide designs for the proposed supplementary sediment control measures.

Sediment traps 1 and 2 have no design included to demonstrate the traps allow the design flow to pass without affecting the existing drainage channel designs. When using a structure within a designed channel the operator must demonstrate the sediment trap design will function adequately and will pass the design event. The drawings do not show the direction of flow and do not have a directional arrow to demonstrate orientation at the site.

Apparently ST-3 and ST-4 receive sheet flow since there are no designed drainages to these sites. Rectangular sediment traps, where they receive sheet flow may be by-passed due to the lack of drainage toward the trap and because the traps are at a level even with the surrounding surface. Sediment Trap ST-3 east of the Propane and petroleum products tank(s) is in a low spot and therefore will likely function adequately. ST-4 is provided with a "V" shaped inlet but does not appear to receive direct runoff. No outlet is provided for ST-3 and ST-4. If these structures concentrate flow, designed outlets should be provided to the sediment pond.

R645-301-746.110 requires all coal mine waste to be placed in new or existing disposal areas within a permit area approved by the Division and, are to be placed in a controlled manner to minimize adverse effects of leachate and surface water runoff on surface and ground water quality and quantity. The operator has not provided details of the coal mine waste cleanout for sedimentation traps.

The inclusion of the 15" culvert at the north side of the Sedimentation Pond must be provided with designs. The operator should include the inlet and outlet elevations as the elevation could affect the function of the Emergency Spillway.

It should be noted that the Emulsion Storage Area previously included on the March 23, 1992 drawing 3.2.1-1 was removed in the May 25, 1993 revision. No discussion of the removal was noted in the revised table for that revision. It is unknown if the Division has reviewed that action. The map legends provided were not very legible. A legible copy should be resubmitted. Additional bonding information presented to cover the reclamation of these structures was included in a cover letter.

Deficiencies:

1. Provide designs for the proposed supplementary sediment control measures.

2. Provide details of the coal mine waste cleanout measures for sedimentation traps.
3. Provide designs for the 15" culvert at the north side of the Sedimentation Pond. The operator should include the inlet and outlet elevations.

RECOMMENDATION

In light of missing information required for sediment control measures amendment ACT/007/005 93-K should not be approved until approvable designs are submitted. Additional bonding information presented to cover the reclamation of these structures was included in a cover letter. It is recommended that the Division require the operator to include bonding information to be submitted in a format to be inserted in the plan. The cumulative affect of minor amendments with small incremental bonding adjustments could lead to a significant change before the 5 year renewal period is reached.

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