0017

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

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DATE: May 18, 1994

TO: File

THRU: Daron Haddock, Permit Supervisor

FROM: Sharon Falvey, Senior Reclamation Hydrologist

RE: N93-39-5-3#1 Abatement-Overland Conveyer Alternate Sediment Control Measures, May 8, 1994, Utah Fuel Company, Skyline Mine, ACT/007/005-93M, Folder #2, Carbon County, Utah

SUMMARY

On May 8, 1994, the operator submitted its response to the January 4, 1994 deficiencies memo and attached technical memo dated December 28, 1994.

The operator proposes that all sites along the overland conveyer where disturbed areas (bents) are cement be considered exempt areas. The operator also proposes to consider top soil storage areas 31 and 32 as exempt. Additionally, disturbed areas would be considered alternate sediment control areas (ASCA).

The operator's proposal is considered adequate for implementation. However, clarification and design information are still lacking.

ANALYSIS

Proposal:

The operator has included typical diagrams for alternate sediment control measures on diagrams 1/2 through 2/2 Section 1, Volume 5. The operator originally removed proposed water bar treatment from Areas 8,9, 10 and 10a, Page 3-67.

Area 23 was amended under Area 23, to include the sentence "This area also contains an ancillary road", Page 3-71.

Area 26 was amended to include six bent disturbances. These areas are considered to be exempt areas by the applicant because they are cement blocks. Area 28 is also considered exempt by the applicant, but was amended to include Bents 97 and 94, Page 3-72.

INSPECTION REPORT
(Continuation sheet) Page 2 of 2

PERMIT NUMBER: ACT/007/005 DATE OF INSPECTION: May 31, 1994

(Comments are Numbered to Correspond with Topics Listed Above)

2. Signs and Markers -

The identification signs were inspected. They contained permittee's name, address, phone number, state I.D. number; the information appeared to be correct.

4a. Diversions -

The diversions were inspected and were functioning as designed. There were no signs of breaching or erosion of the ditches. Several ditches were recently cleaned and reshaped. There was no water flowing within the diches at the time of the inspection.

4c. Other Sediment Control Measures -

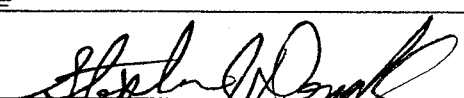
Silt fences and straw bales were inspected with no signs of breaching occuring.

The Division has conditionally approved the placement of straw bales and silt fences for ASCA areas which are under a Notice of Violation.

Note: This inspection report does not constitute an affidavit of compliance with the regulatory program of the Division of Oil, Gas and Mining.

Copy of this Report:

Mailed to: Coastal States Energy/Utah Fuel, Keith Zobell
Mailed to: Bernie Freeman (OSM)
Given to: Joe Helfrich (DOGM)
Filed to: Price Field Office
Date: June 2, 1994

Inspector's Signature and Number:  #39
Stephen J. Demczak

Area 30 is classified exempt by the operator and was amended to make exception for the references to the disturbed areas in Area 30(a), Page 3-72 (a).

Area 30 (a) references disturbed areas which are not fully revegetated. The disturbances associated with Bent 59 (upper support), Bent 44 (lower leg), Bent 36 (upper leg), Bent 32, Bent 28, 26, and 22 are classified as ASCA 's. Bent GB-6 to midway of truss No. 3 is disturbed due to a coal spill and is classified an as ASCA. All Alternate Sediment Control Measures (ASCM) are to be treated with straw bales or silt fences. Other areas use measures including reseeding and mulching.

Page 3-72 (b) is amended to include a commitment to re-classify Exempt Areas as ASCA, if they are redisturbed.

The operator shows the pad inslope at the portal breakout to be 1-3% on Figure 3.2.11-1. The operator also shows a berm along the bottom edge of the pad. The operator had previously included a discussion of the drainage into the mine on Page 3-36.

Analysis:

Water bar design information from the earlier proposed operations has been removed. The operator has maintained that the design for straw bales can be put directly on the surface where good ground contact is met.

The concept of placing the straw bales directly on the ground surface sounds good, but it has been shown to be less effective in practice especially when larger events occur. According to numerous Alternative Sediment Control Measure references, proper installation includes staking, trenching and backfilling structures. The success of the proposed design will be based by performance on a case by case basis to determine if the proposed installation is adequate.

The operator has identified the ASCA's in Area 30 (a). These disturbances are associated with specific bents in Area 30, and are identified by circling the bent area on Figures 3.23-3E and 3.23F.

The operator also submitted results from the SEDCAD+ Sedimentology model to demonstrate that the topsoil piles would not contribute sediment in violation of the effluent limitations. The demonstration shows no runoff will occur. The operator should provide the basis for the CN used in this demonstration. In all cases where the SEDCAD+ model is used, the operator should include mapping of the location and the lab analysis for the soil particle sizing. In this case, this information is requested only to be consistent with design requirements. It is acknowledged that the operator's results show no flow off the area. However, a simple runoff determination, rather

than the SEDCAD+ model would provide adequate information in cases where no runoff occurs for the design event.

Information provided for Area 32 is incomplete in that there is some question as to whether the flow from the upstream watershed flows onto the topsoil pile. If this area is diverted around the topsoil pile, a ditch design, berm, or other appropriate method showing flow direction and flow controls should be provided. Otherwise, the operator should route the flow from the area above the topsoil pile through Area 32 to obtain a value representative of the site. Should this area produce flow, the request for the lab analysis and location of soils becomes necessary.

No calculations of runoff from any of the ASCA's could be found. It is recognized that many of these areas are small disturbances with larger areas providing runoff from above and may create a problem for the operator. The operator could simplify the design requirement by providing one "worse case scenario" to demonstrate that the proposed design is adequate. This would include a worst case CN and, the largest watershed area delineated and routed to the largest disturbed area proposed for each specific BTCA. Larger disturbed areas, such as area 9 may need to be addressed separately. Additionally, no design could be located for the berm at the outslope of the Portal Breakout Area.

The operator has differing values for disturbed area 8 as shown in Figure 3.2.3-3A and as shown in the text Page 3-67. The operator should correct the text, or map, so that references match the figures showing Area 30.

Deficiencies:

1. To meet the requirements of R645-301-120, the values for Disturbed area 8 as shown in Figure 3.2.3-3A and text Page 3-67 should correspond. The operator should correct the text, or map, so the text matches the Areas 30 as shown in Figures 3.23-3D through 3.23- 3F.

2. The operator must include designs for the event to be treated by the ASCM which shows that design criteria are met as required by R645-301-741. The methods used and calculated results are to be provided (R645-301-711.300). (To facilitate the process, the operator could simplify the design by providing one worse case scenario as the design for each BTCA measure or combination of measures. This would include a worst case CN, and the largest watershed area delineated and routed to the largest disturbed area for which the BTCA measure(s) are used. Larger disturbed areas may need to be addressed separately as well as the berm at the portal breakout area.)

3. The operator should provide the method and site specific criteria used for the CN determination for the exempt area demonstrations as required by R645-301-711.300. The operator's demonstration for Area 32 should include routing the flow from the area above the topsoil pile or, if this area is diverted around the topsoil pile, provide a ditch design berm or other appropriate method showing flow direction and flow controls. Should the area produce flow, the request for the soil particle size lab analysis and location of soils samples becomes necessary (R645-301-130). In all cases where the SEDCAD+ model is used, the operator should include mapping of the location of soil samples and the lab analysis of the particle size distribution.

4. The operator must provide a monitoring plan to sample collectable drainage from these areas when practical so as to demonstrate that performance standards are being met as required under R645-301-742.112 and R645-301-731.221.

RECOMMENDATION

The information critical to the termination of NOV 93-39-5-3#1 is the design component. However, no construction diagrams are present. None of the proposed ASCM have an associated design for the runoff event. It is recommended that the operator be allowed to proceed with implementation of the proposed sediment control measures and provide the requested design information prior to termination of the NOV.

The operator has proposed an unconventional design for straw bales. To determine if the installation is adequate, these designs should be carefully monitored during a rain event by the inspection team and a determination of adequacy of the proposed design will be based on performance on a case by case basis. Successful operation for a 10 year 24 hour event would determine adequacy.