



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

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July 14, 1995

TO: Daron Haddock, Permit Supervisor

FROM: Steven M. Johnson, Reclamation Hydrologist *S.M.J.*

RE: Draft Review, ASCA/Exempt Areas, Skyline Mine, Utah Fuel Company, ACT/007/005-94H, Working File, Carbon County, Utah

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SYNOPSIS

Utah Fuel Company submitted an amendment to the Skyline Mining and Reclamation Plan (MRP) in December 1994. The amendment proposed modifications to the sediment control plan for a few smaller areas. The Division held the amendment without review for a few months contingent on the final draft of Directive Tech-003A. The Division Director signed the directive on April 19, 1995. The amendment was then reviewed considering the policy clarified in that directive.

Also considered in this review is a letter dated July 7, 1995, from Ken Payne of Utah Fuel Company to Daron Haddock of the Division.

ANALYSIS

OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: R645-301-730, 740, 750

Analysis:

Sediment control measures. 732. 742

Three pages in this amendment are dedicated to typical designs of silt fence and straw bale installation as sediment control. These designs are certified by a professional engineer. These drawings are intended for insertion to Volume 5, Section 20.

Utah Fuel Company modified Section 3.2.12, Areas Not Reporting to Sedimentation Ponds, Exempt Areas and Special Exempt areas. Alternate sediment control areas (ASCAs) are also included and modified in this section. The specific changes to this section are outlined below.

Area 1 is sized at 0.19 acres and is classified as an exempt area. Vegetation has been reestablished on the area in a cover of grass, forbs, and trees. A SedCad analysis has been run on the area to show that it qualifies as a small exempt area. The SedCad analysis shows that there would be a peak settleable solid concentration of 0.15 mg/L runoff resulting from the 10-year, 24-hour storm



event. This is less than the settleable solid effluent limit of 0.5 mg/L. The curve number was taken from the SCS Soil Survey of Carbon Area, Utah.

Area 4, North Fork of Eccles Creek, is 1.0 acres in size and is classified as an alternate sediment control area. It is shown on Map No. 3.2.1-1. It has a sediment control measure of straw bales and/or silt fences.

Areas 5, 6 and 14 are paved areas of 0.18, 0.07 and 0.31 acres, respectively, which are classified as exempt areas.

Area 12 is an alternate sediment control area of 0.01 acres. It is shown on Map No. 3.2.3-3b.

Area 12a is the roadway to the well house and South Fork Area. It is mainly covered with large rock and is 0.03 acres in size. No definition is given to its status as exempt or ASCA.

Area 15 is just north of the truck dump, shown on Map No. 3.2.1-3. It is an ASCA, treated by straw bales and/or silt fence.

Area 17 is south of the RLO sediment pond. It is located on Map No. 3.2.1-3 and is 0.35 acres in size. It is an ASCA treated by pavement and straw bales. Area 17a is next to the RLO sediment pond, shown on Map No. 3.2.1-3. It is 0.15 acres and classified as an exempt area because it is the outslope of the sediment pond.

Area 18 is next to the RLO structure, shown on Map 3.2.1-3. The area is 0.1 acres and classified as an exempt area because it is entirely paved. Area 19 is also located adjacent to the RLO structure, and shown on Map 3.2.1-3. It is 0.1 acres in size and classified as an ASCA. The treatment for this area is gravel and straw bales and/or silt fence.

Areas 20, 21 and 22 are listed as exempt areas, entirely covered with pavement. Area 20 is also treated by straw bale. These areas can be considered as roads. Area 24 is the road to the Scofield Waste Rock site. It is classified as a road.

Area 24a is 0.03 acres next to the Scofield Waste Rock site road. It is classified as an exempt area. A SedCad model has been run and is included in Volume 5, Section 21 to demonstrate this area's suitability as an exempt area. Data included in the SedCad analysis includes a composite soil sample size distribution, an area of 0.03 acres, and a curve number 65. Under these parameters the SedCad returns a discharge of zero, and, therefore, no sediment production. The plan text shows the area of this site to be 0.1 acres. The curve number was taken from the SCS Soil Survey of Carbon Area, Utah.

Area 31 and 32 are topsoil piles located in the South Fork of Eccles Creek. The respective land areas are not given in the text. SedCad demonstrations run on these areas are included in Volume 5, Section 21 to show the suitability as exempt areas. The SedCad analyses includes input data of soil

particle size distribution, Areas of 0.09 and 0.13 (and/or 0.004) acre, respectively, and curve numbers of 61 for both sites. The curve numbers were taken from the SCS Soil Survey of Carbon Area, Utah.

Findings:

The permittee has submitted typical designs, which in concert with the mapping of alternate sediment control measures, fulfills the requirements of design sediment control measures in R645-301-742.

The permittee has submitted ample information to demonstrate that areas 1, 24a, 31 and 32 should be exempt from sediment control measures. The curve numbers used were taken from the SCS Soil Survey of Carbon Area, Utah. However, these curve numbers are derived for areas that are undisturbed, however, the sediment analyses are being run on areas that have been disturbed. These disturbances, through changes in soil structure and type and makeup of vegetation, most likely have changed the curve numbers in this area. On the other hand, the Division is not aware of any other means by which curve numbers can be derived for disturbed areas; therefore, Utah Fuel Company has used the best possible means in demonstrating these areas will meet effluent limitations.

Areas 5, 6, 12a, 14 18, 20, 21, 22, and 24 satisfy the regulation as areas exempt from sediment control because they are small and/or they are roads, out slopes of sediment ponds or entirely covered with pavement.

RECOMMENDATION

This amendment should be approved because the demonstrations for small area exemptions from sediment control are complete considering that the Division does not have a more accurate means to calculate curve numbers for small disturbances. However, it should be noted that there are other ways in which small, revegetated areas can be permitted such that vegetation is the only sediment control. The Division in the Sediment Control Directive issued April 1995, has made available a method for using vegetation as an alternate sediment control measure. This is the preferred method because the issue of the adaptability of curve numbers and other variable to small disturbed sites is avoided.