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TO: Daron Haddock, Permit Supervisor

FROM: Sharon Falvey, Senior Reclamation Hydrologist *SF*

RE: SAE Plans, Genwal Resources Inc., Crandall Canyon Mine, ACT/015/032-94E, Folder #2, Emery County, Utah

#### SUMMARY

On 1/13/95 the Permittee submitted amendment 94E to the Price Field Office; it was forwarded to the Salt Lake City Office on 2/6/1995. A final Alternate Sediment Control Measure ("ASCM") and Small Area Exemption ("SAE") Policy was completed at the Division on 4/24/95.

In this amendment the Permittee submitted a demonstration for proposed SAE's. The Permittee did not re-submit earlier text changes revised on 09/26/94. It is necessary that these text changes be incorporated with this submittal. The permittee also submitted two variations of the first page for SAE Sediment-Yield Calculations. It is not clear which page was intended to be incorporated.

#### Analysis:

The Permittee has submitted Sediment-Yield Data for 3 topsoil piles, proposed SAE-5, SAE-6, and SAE-7. The following identifies deficiencies of the design elements pertaining to the SEDCAD + model:

1. The Permittee did not indicate how the soil particle size distribution was obtained. SEDCAD recommends use of the erosive particle sizes. The recommended method is to wet sieve the sample. No dispersing agents or grinding should be used. Use of existing data for soil samples particle size is acceptable when they represent the site specific soils; (e.g., for a topsoil pile previously identified soil size distributions may be used. The location of the information should be referenced).

2. According to the soils map Plate 1, the soils most likely gathered as topsoil was map unit #301. This map unit has a K value of 0.20. The Permittee used a K value of 0.015. The larger value indicates an increased erodability.
3. The permittee used a vegetative filter as part of the submittal. The vegetative filter indicates an ASCM and not a SAE. Additionally, the vegetative filter design is said to be located at the last five feet of the pile. Accepted design applications place the filter at a grade change at the base of a slope where particles can settle out. The infiltration rate used in the filter strip design is for Hydrologic group A which rarely exists in this area. The assumptions used to obtain the CP factor and infiltration rate were not presented.

Through discussions with Randy Gainer it was indicated the Permittee intends to pursue SAE's at the topsoil pile. However, it may be some time before the permittee is able to provide these changes. The existing sediment controls were previously approved erosion control measures. The wording in the current plan describes these erosion control measures as SAE's but does not fit the definition for SAE's as determined by recent Division policy. Text changes updating the SAE areas as ASCM's is necessary to accurately describe these areas until the SAE areas are approved.

#### **Findings:**

The Permittee presently uses alternate sediment control measures at the topsoil piles. However, the text of the plan presently describes all alternate sediment control measures as SAE's. To accurately describe the existing sediment control measures these areas should be described as alternate sediment control areas. An earlier submittal (revised 09/26/94) correctly defined the ASCM's, but was not re-submitted.

#### **RECOMMENDATION**

It is recommended this amendment be denied until further clarification for values used in the demonstration (meeting performance standards) are presented. The existing practices are representative of ASCM's rather than SAE's. The text should be updated to accurately represent the existing sediment control measures as ASCA's.