



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

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May 23, 1995

Randy Gainer
Genwal Coal Company
P. O. Box 1201
Huntington, Utah 84528

Re: Continued Deficiencies in SAE Plans, Genwal Coal Company, Crandall Canyon Mine, ACT/015/032-94E, Folder #3, Emery County, Utah.

Dear Mr. Gainer:

Your submittal made on January 13, 1995, regarding Small Area Exemptions #5, #6, & #7 has been reviewed in light of the Division's recent directive on sediment control measures. There are remaining deficiencies in your plans for these SAE's and therefore, your application cannot be approved at this time. Please review the enclosed memo which discusses the problems. You should correct the problems with your application and resubmit it in order to provide an accurate plan with regard to alternate sediment control and small area exemptions. A response is needed by no later than June 23, 1995. Also enclosed for your information is a copy of the Sediment Control Directive.

Please call me or Sharon Falvey, if you have any questions.

Sincerely,

Daron R. Haddock
Permit Supervisor

enclosure

cc: S. Falvey
P. Grubaugh-littig
D. Darby

saedefic.gen





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May 10, 1995

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

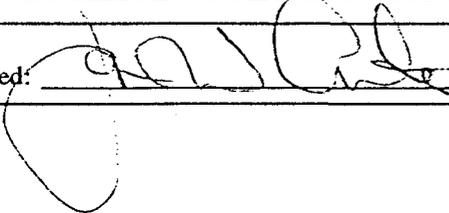
It is recommended this amendment be denied until further clarification for values used in the demonstration (meeting performance standards) are presented. The existing practices are representative of ASCM's rather than SAE's. The text should be updated to accurately represent the existing sediment control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



State of Utah
 Department of Natural Resources
 Division of Oil, Gas and Mining
Coal Regulatory Program Directive

Directive Number: Tech-003A
Version Date: April 19, 1995
Supersedes: Tech-003

Subject: **Sediment Control Measures for Disturbed Coal Mine Lands**

Approved:  James W. Carter, Director, Division of Oil, Gas, and Mining

ABSTRACT

The Coal Regulatory Program requires that Utah mines design, construct, and maintain appropriate sediment controls using the Best Technology Currently Available to: (1) prevent to the extent possible, additional contribution of sediment to streamflow or runoff outside the permit area, (2) meet the applicable effluent limits, and (3) minimize erosion, to the extent possible. This directive provides the guidance necessary to achieve the goals and objectives of a successful sediment control program. By defining terms, stating objectives, and identifying responsibilities, it is meant to clarify the Division's position on Alternative Sediment Control.

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1. Executive Summary and Purpose

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) provides for the extraction of coal from the earth in an environmentally sound manner. One consideration in environmentally safe mining is the control of both surface runoff and of the amount of sediment that is allowed to move offsite and into the natural waterways. As contemplated in SMCRA 101(f) and the Utah Cooperative Agreement, the Utah Division of Oil, Gas and Mining carries the primary responsibility for implementing SMCRA within the State of Utah.

The goal of the Utah program is to control runoff and sediment from disturbed areas so that coal mining surface disturbances do not have an adverse impact on streamflow or on contiguous undisturbed areas outside the permitted disturbed area. Under the approved Utah program two classes of sediment control measures are acceptable as Best Technology Currently Available (BTCA). They are: 1) Sediment ponds and/or "other treatment facilities", and 2) "alternate sediment control measures". A third programmatic option in Utah is the exemption of small areas from sediment control practices. Sediment control at Utah coal mines should be approached by investigating possible measures in the order noted in the preceding two sentences.

This Directive provides guidelines on sediment control to facilitate permitting of and compliance at Utah coal mines. The applications of BTCA and SAE's to sediment control are clarified. Information regarding the design of BTCA measures is provided.

2. Regulatory Basis

R645-301-741 thru 742.126 and 742.240.

741. General Requirements. Each permit application will include site-specific plans that incorporate minimum design criteria as set forth in R645-301-740 for the control of drainage from disturbed and undisturbed areas.

742. Sediment Control Measures.

742.100. General Requirements.

742.110. Appropriate sediment control measures will be designed, constructed and maintained using the best technology currently available to:

742.111. Prevent, to the extent possible, additional contributions of sediment to stream flow or to runoff outside the permit area;

742.112. Meet the effluent limitations under R645-301-751; and

742.113. Minimize erosion to the extent possible.

742.120. Sediment control measures include practices carried out within and adjacent to the disturbed area. The sedimentation storage capacity of practices in and downstream from the disturbed areas will reflect the degree to which successful mining and reclamation techniques are applied to reduce erosion and control sediment. Sediment control measures consist of the utilization of proper mining and reclamation methods and sediment control practices, singly or in combination. Sediment control methods include, but are not limited to:

742.121. Retaining sediment within disturbed areas;

742.122. Diverting runoff away from disturbed areas;

742.123. Diverting runoff using protected channels or pipes through disturbed areas so as not to cause additional erosion;

742.124. Using straw dikes, riprap, check dams, mulches, vegetative sediment filters, dugout ponds and other measures that reduce overland flow velocities, reduce runoff volumes or trap sediment;

742.240. Exemptions. Exemptions to the requirements of R645-301-742.200 and R645-301-763 may be granted if the disturbed drainage area within the total disturbed area is small and the operator demonstrates that siltation structures and alternate sediment control measures are not necessary for drainage from the disturbed areas to meet the effluent limitations under R645-301-751 or the applicable Utah and federal water quality standards for the receiving waters.

3. Definitions

A. "Siltation Structure" means, for the purposes of R645-301-356.300, R645-301-356.400, R645-301-513.200, R645-301-742.200 through R645-301-742.240, and R645-301-763, a sedimentation pond, a series of sedimentation ponds or other treatment facilities.

B. "Other Treatment Facilities" means, for the purposes of R645-301-356.300, R645-301-356.400,

contributions of sediment to streamflow or runoff outside the permit area.

C. By Memorandum of Understanding (MOU) dated October 16, 1990, between the Division of Oil, Gas and Mining (DOGM) and the Utah Department of Health, Division of Environmental Health, (DEH) covering permitting of mining operations in Utah, DOGM acknowledges that the Utah Water Pollution Committee is the UPDES and UIC permitting authority as delegated by the Environmental Protection Agency (EPA). By letter dated September 30, 1991, in recognition of the newly established Utah Department of Environmental Quality (DEQ) Brent Bradford, Deputy Director, DEQ, assigned this October 16, 1992 MOU to DEQ. All permitting actions requiring a determination of need for a UPDES permit shall be referred by the Division to DEQ. The October 16, 1990 MOU and the September 30, 1991 letter, assigning the MOU to DEQ, are incorporated into this directive as Appendix A.

D. Effluent limits for Alternative Sediment Control Areas shall be those established by DEQ, Division of Water Quality's review of the application. Where UPDES permits are required by DEQ/DWQ, the Division will review designs to ensure designs meet the applicable regulatory requirements. Where UPDES permits are not specified after review by DEQ/DWQ, the Division will review the proposed Alternate Sediment Control Measures to determine their applicability as Best Technology Currently Available.

E. Small Area Exemptions (SAE's) will be approved if the disturbed area within the total disturbed area is small and the operator demonstrates that sediment control is not necessary for drainage from the exempted disturbed area to meet all applicable Utah and federal water quality regulations pertaining to non-point source disturbances. In applying for an SAE, the operator must provide a demonstration that the area will meet applicable effluent limits. A demonstration based on SEDCAD or other professionally accepted methodology that is based on the Universal Soil Loss Equation shall be deemed an acceptable demonstration for consideration for an SAE.

5. Procedure

A. Protective measures - that prevent, to the extent possible, additional contributions of sediment to streamflow or runoff outside the permit area - will be assured by employing an appropriate combination of approved Best Technology Currently Available (BTCA). Siltation structures are the preferred BTCA, and where

the construction of such structures would cause an increase in surface disturbance that outweighs the benefits of treatment by the structure will require use of alternative sediment control measures. Sediment control measures will be employed prior to any disturbance and until reclamation has progressed to the point where the operator has demonstrated and the Division has made a written finding that specified areas are exempt from sediment control.

B. Designs for sediment control measure will be completed by the permittee and submitted to the Division for approval. All disturbed area drainage must be clearly depicted on appropriate maps and identified with their respective sediment control measure. A disturbed area acreage calculation for each sediment control area will be provided in the plan in either tabular or narrative form. Designs may be in written, tabular, or graphical form, and must include, at minimum, a generalized description of the methods and elements used to comply with R645-301-742.110. Some elements of a design may not be easily reconstructed, however, in a case the reconstruction is necessary, a new or secondary design may be implemented. For example, the designed measure may become less effective in controlling additional contributions of sediment which makes it necessary to use an additional measure, such as silt fence, until the initial measure's effectiveness is restored. A proposed sediment control measure's design shall include adequate detail to determine the functionality of the specific practice. Table 1 provides a list of standards that Best Technology Currently Available measures must meet.

C. A vegetative filter may or may not be applicable as a Best Technology Currently Available measure, but, when applicable, it should be designed based on the criteria outlined in the OSM Handbook of Alternative Sediment Control Methodologies or other professionally acceptable references.

D. Sediment control measures shall be reviewed by the Division to assure adequacy of design. The Division will substantiate its basis for approval in the TA and will provide analysis of the information provided on which the adequacy determination is made. References for design and performance considerations will be cited from those listed in the OSM "Handbook of Alternative Sediment Control Technologies" or other professionally acceptable references that meet performance standards in the state of Utah.

E. Proposed designs for an Alternate Sediment Control Measure must be evaluated based on its intended use and