



STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

ACT/015/032  
File #2  
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April 19, 1988

TO: File

FROM: Rick P. Summers, Reclamation Hydrologist *RS*

RE: Five-Year Permit Renewal, Genwal Coal Company, Crandall Canyon Mine, ACT/015/032, Folder No. 2, Emery County, Utah

Summary:

The above-referenced submittal was reviewed during April of 1988. Generally, the permit application is complete and of high quality. However, several concerns were noted during the review. The applicant should correct these concerns prior to permit approval.

Body:

UMC 771.23 Permit Applications-General Requirements For Format and Content - RS

Figures 7-13 and 7-14 are current through 1984. These should be updated to include information current to this permit date.

Appendix 7-3 contains surface water monitoring data current through 1985. The applicant should submit water quality and flow data for these sites current with this permit application. Additionally, this data should be summarized and a narrative included discussing the results and conclusions of the monitoring program to date.

The original application contained Table 7-5a, a summary of water quality data for Crandall Creek. This table was not located in the resubmission. This table should be included and updated to include data collected since the last permit review.

UMC 783.17 Alternative Water Supply Information - RS

Although the application presents a discussion of the possibility of water supply contamination or diminution (with a

conclusion that the operation will not impact the sources), a mine operation has the possibility to impact water resources. The possibility has been minimized at the site due to implementation of sediment control structures; and an adequate monitoring program has been implemented to detect any impacts. However, the applicant is requested to submit information identifying alternative sources of water supply that could be developed to replace the existing sources. Typically this regulation is satisfied by simply adding a paragraph to the Mining and Reclamation Plan (MRP) that identifies water rights that could be purchased or transferred if impacts occur.

UMC 784.14 Reclamation Plan: Protection Of Hydrologic Balance - RS

Figure 7-20 should be updated to depict the locations of the NPDES monitoring point(s).

The applicant has proposed a monitoring program for surface waters that is generally consistent with current Division of Oil, Gas and Mining (Division) water quality monitoring guidelines. However, Tables 7-8 and 7-9 should add acidity and total iron to the parameter lists for water quality analysis. The applicant should also commit to submission of a cation-anion balance for all samples.

UMC 784.16 Reclamation Plan: Ponds, Impoundments, Dams, And Embankments - RS

The application should add narrative to page 7-63 explaining measures to protect or reinstall the clay liner in the sedimentation pond following cleanout operations.

The application should contain the certification report for the sedimentation pond discussed on page 7-64 in this application.

Section 3.5.1 should be revised to include a commitment to achieve the cover values for the contemporaneous reclamation areas used in the design of the sedimentation pond prior to 1989. This narrative should also include an alternative plan to be implemented if the values are not achieved.

The Division analysis of the predicted sediment storage volume presented on page 7-58 of Chapter 7, and in Appendix 7-4, resulted in differing values for the period of design storage. The application presented USLE calculations that resulted in a predicted sediment storage volume for a period of ten (10) years. However, the Division calculations show the period to be approximately three years. The differences result from the use of the assumption values

in the calculations. The Division calculations were performed using soils information and the topographic maps of the site presented in the permit. The following table summarizes the review:

Reclaimed Areas:

<u>Parameter</u>	<u>DOGM VALUE</u>	<u>Genwal Value</u>
R	28.12	26
K	0.15	0.15
LS	23.87	21.66
CP	0.01	0.01
Area	1.75 AC.	2.0 AC

Undisturbed Areas:

<u>Parameter</u>	<u>DOGM VALUE</u>	<u>Genwal Value</u>
R	28.12	26.0
K	0.27	0.15
LS	67.1	42.92
CP	0.007	0.005
Area	5.84 Ac	5.7 Ac

These values were based upon the following: (1) R values include snow and rain (Isrealson, 1984); (2) K values include the average of three (3) areas calculated by the Division soil scientist based upon the soil survey information in the permit; and (3) the CP factor for the undisturbed areas was based upon a 50% cover as presented in the permit.

This is not a critical concern. These values are predicted values and if the calculations prove to be an inaccurate prediction of the sediment delivered to the pond, the resultant effect would be a more frequent sediment pond cleanout. The Division may approve a design volume for a period of three years. The Division calculations demonstrate that the pond has the capacity to contain this volume. The application is approvable if the above pages are revised to reflect a three-year predicted sediment load to the pond.

UMC 784.22 Diversions - RS

The application contains details of the as-built designs for the diversions at the site. These designs appear to be detailed

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and contain adequate information to proceed with a technical review. The review will be performed by the Division during the next stage of the permitting process.

Page 7-70 and Appendix 7-7 (p. 8 of 27) discuss a flexible downspout for the discharge of UD-1 into Crandall Creek. To date, this spout has not been installed. The application should remove all references to this spout and include an alternative energy dissipation structure as necessary. It is possible that the discharge could be directed to existing bedrock/boulder material to satisfy this requirement.

UMC 817.53 Hydrologic Balance: Transfer Of Wells - RS

A discussion of the plans for the water well (MW-1) following reclamation was not included in the application. The application should describe plugging procedures or intent to transfer the well.

jr  
cc: B team  
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