ACT/007/004
F.#2

0040

January 28, 1988

TO: File

FROM: Rick P. Summers, Reclamation Hydrologist
Kent Wheeler, Reclamation Hydrologist

RE: Mid-Permit Term Review, Castle Gate Coal Company, Price River Complex, ACT/007/004, Folder No. 2, Carbon County, Utah

SUMMARY:

The above-referenced plan was reviewed and discussed with the operator the week of January 18, 1988. Editing details were discussed with the operator and are not discussed in this memo. The Mining and Reclamation Plan (MRP) should reflect the current plans and conditions at the minesite. Also, we suggested that the operator provide a subsection by subsection regulation cross-reference to specific pages in the application. This will aid the operator in editing the document, and will help to ensure that the permit is complete and contains no conflicting information.

A technical review was attempted to determine if the MRP is in compliance with the regulations. However, the current MRP is not complete enough to determine technical adequacy in most areas.

The following cursory review has been conducted on the information pertaining to Sowbelly Canyon, and on information in Chapter 7 (General Hydrology). Most of the points discussed below apply to all of the disturbed areas in the mine permit area, and should be addressed for each disturbed area.

This is not to be considered a complete review. The following deficiencies were found during this review:

COMMENTS

UMC 783.14 - 15 Ground and Surface Water Information - KW

These sections require that all hydrologic baseline data be submitted with the MRP. This data appears to be included. However, the reproductions are of such poor quality that they are illegible. Clear copies of this data must be submitted, along with summaries of the data from each station for each parameter. These summaries should include the maximum, minimum, average, standard deviation, and sample size for each parameter.

UMC 784.13(b) Reclamation Plan: General Requirements - KW

The MRP needs to specifically discuss the reclamation timetable. This includes regrading, revegetation, and removal of the sediment ponds. Plans for sediment pond reclamation (including a commitment to maintain the ponds until the requirements of UMC 817.46 (u) have been met) were not located in the permit. The reclamation timetable should reflect this commitment.

UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance - KW

This section has not been fully addressed in the mine plan. The section should include discussion, maps and plans of:

1. All Best Management Practices that will be used during the reclamation period, especially if the applicant proposes using alternative sediment control practices instead of sediment ponds.

2. The water monitoring program. This program needs to be corrected and updated. This will require updating the text to describe the current monitoring locations. The applicant should incorporate the operational parameters from the Division's water monitoring guidelines into the sampling plan. The applicant may propose to delete some of these parameters, if justification is presented based upon baseline data and conditions at the site.

UMC 784.22 Diversions
UMC 817.43 Hydrologic Balance: Diversions and Conveyance of Overland Flow, Shallow Ground Water Flow, and Ephemeral Streams - RS

1. The application does not present an Exhibit with labels of the diversions and culverts located in Sowbelly Canyon.

2. The watersheds presented on Exhibit 7-3 are not of adequate scale to verify the hydrologic assumptions used in the calculation of design peak flows.

3. Riprap sizes are not given for all diversions. The riprap sizes presented in the MRP are not specified as D_{50} or D_{max}.

4. An Exhibit could not be located verifying the diversion slopes. A topographic map of adequate scale or a longitudinal profile of each diversion should be submitted.

5. Energy dissipators required by Subsection (f)(3) and UMC 817.47 have not been addressed.

UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance
UMC 784.16 Reclamation Plan: Ponds, Impoundments, Banks, Dams, and Embankments
UMC 817.46 Hydrologic Balance: Sedimentation Ponds - RS

1. A map of Sediment Pond #004 was not submitted in the application. It also appears that maps for ponds in other canyons were not submitted.

2. A map of the drainage area to each pond was not included in the submittal.

3. The application used a value of 0.035 AF sediment for each acre of disturbance. The application includes a research paper that was used to justify this value, but the paper was not cited, and the copy in the application contained information that was "blacked out".

4. Information required by the Department of State Health (letter of January 27, 1987) concerning oil skimmers;

sediment storage volume and freeboard; and specific concerns with ponds 3, 7, 8, 9, 11, and 15 should be included in the MRP.

5. The curve numbers, used for design calculations, conflict throughout the application. The peak flow designs are extremely sensitive to the selection of this value. The permit should use consistent values and provide the information and assumptions used to select those values.

UMC 784.24(a) Transportation Facilities - KW

The applicant proposes leaving the road in for the post-mining land use. This regulation requires cross-sections of this proposed road, showing that the drainage system meets the performance standards in Sub-chapter K.

UMC 817.42 Hydrologic Balance: Water Quality Standards and Effluent Limitations - RS

1. The application does not contain adequate detail to determine the drainage area to each pond. The operator should submit an Exhibit depicting which disturbed areas report to each sedimentation pond. For all disturbed areas not reporting to a pond, the application must address Subsection (a)(3) of this regulation (Small Area Exemptions). The chlorination plant and the lower substation are examples of these areas.

jr
cc: S. Linner
D. Darby
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