



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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December 16, 1988

TO: Sue Linner, Permit Supervisor

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

RE: Permit Renewal (received December 7, 1988), Crandall Canyon Mine, Genwal Coal Company, ACT/015/032, Folder #2, Carbon County, Utah

Summary:

The company has responded adequately to the comments relative to hydrologic permit renewal issues by Mike DeWeese, Staff Reclamation Hydrologist, in his October 11, 1988 memo to file. The details of the review are summarized in this memo. The hydrology staff recommends renewal of the permit as proposed.

Review Comments and Adequacy:

Original Comment

UMC 817.43 Hydrologic Balance: Diversions and Conveyance of Overland Flow, Shallow Groundwater Flow, and Ephemeral Streams

Plate 7-5a depicts diversion DD-7 which is designed to report to culvert C-4. Site inspections by Division personnel indicated that a break in slope exists in the diversion channel approximately 15 feet from the culvert inlet. Flow in this reach reports to the culvert as designed, but the remainder of the channel flows in the opposite direction off the permit area. A straw bale check dam has been installed in the channel at the permit boundary in an attempt to provide sediment control. This measure has failed to function effectively as the flow short circuits around the dam and onto the road, then continues off site.

The Division believes that the diversion design is not practical for site conditions because the existing road slopes in the opposite direction that the diversion must slope. Furthermore, site constraints do not allow the necessary space to install an adequate sediment trap. Therefore, the applicant must submit a revised design for diversion DD-7 in which all flow in the diversion channel reports to the sedimentation pond. This can be accomplished by installing a small culvert across the road at the east end of the diversion extending down the slope to the pond.

Applicant's Response and Adequacy

The applicant has proposed to install a culvert at the location C-6 identified on Plates 7-5 and 7-5a. Design information presented in the application estimates the 10 yr. - 24 hr. peak flow from this area to be less than 1/2 cfs (0.13 cfs). The applicant's response is adequate for approval.

Original Comment

UMC 817.45 Hydrologic Balance: Sediment Control Measures

Page 7-68 of the MRP describes the sediment control measures implemented on SAE-1, which consist of a 5 foot grass filter zone. The applicant has demonstrated that this is an effective measure, however the grass filter does not meet the width requirement for the entire length of SAE-1. Silt fences have been installed intermittently in sections that do not meet the width requirement to provide an alternate form of sediment control in these areas.

Plates 3-1, 7-5a, and 7-5c depict the silt fence as continuous along the entire length of SAE-1. This discrepancy must be corrected to depict the silt fence in the areas of SAE-1 where it has been installed. Stipulation 817.45 (1) - MMD is necessary for approval.

Applicant's Response and Adequacy

The applicant has removed the location of the silt fence described above from plates 7-5a and 7-5c and added precise locations to Plate 3-1. The applicant commits to retaining silt fence in areas where the vegetated buffer is less than five (5) feet. The applicant presents information in section 7.2.3.2 and Appendix 7-7 that demonstrates the vegetated filter is adequate to minimize sediment from SAE-1.

UMC 817.52 Hydrologic Balance: Surface and Ground Water Monitoring

An NPDES permit has been issued for discharge from the sedimentation pond primary spillway and mine dewatering discharges. Plate 3-1 depicts the 12 inch CMP primary spillway outlet and the 4 inch aluminum pipe used for mine dewatering. The NPDES discharge point is labeled only as a 12 inch CMP, disregarding the 4 inch pipe outlet. This plate must be corrected to clearly depict both the 12 cmp outlet and the 4 inch aluminum pipe outlet as NPDES discharge points and label them accordingly.

Item 2-10 of the MRP lists NPDES permit UT-0024368, issued Dec. 10, 1985, as the current permit. No copies of this permit were found in the MRP. The operator must submit a copy of the current NPDES permit for Division records. Item 2-10 should be updated to include any revised permits issued since 1985.

Applicant's Response and Adequacy

The applicant has added identification labels for the 12 and 4 inch discharge lines to Plate 3-1. The applicant's response is adequate for approval.

Original Comment

UMC 817.52 Hydrologic Balance: Surface and Ground Water Monitoring

The operator has submitted a basically sound plan for ground water monitoring. However, the ground water information supplied in the MRP is technically inadequate to identify aquifer characteristics required by UMC 783.15. The Division has determined that the operator must install two bore holes in the mine to provide additional ground water monitoring points (UMC 783.15 Ground Water Information - DWD).

Based on the addition of these wells and the need to identify more detailed aquifer characteristics, the proposed ground water monitoring plan is technically inadequate. The operator must submit a revision to the MRP which incorporates the two in-mine wells into the existing monitoring program described in section 7.1.6 of the MRP. The location of the wells must be included on an appropriate map.

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The sampling procedure for ground water monitoring is not included in the MRP. The operator must include a narrative describing the standard sampling procedure to be implemented in the monitoring program. This procedure should include a commitment to purge the well of stagnant water by removing 3-5 casing volumes prior to collecting any samples.

Applicant's Response and Adequacy

The applicant has committed to installing two additional monitoring wells. The wells are depicted on Figure 7-4. Section 7.1.6 has been revised to discuss the sampling procedures to be used in more detail. The applicant basically commits to collection, preservation and analysis of all water quality samples in accordance with E.P.A. standard methods and procedures.

cc: M. DeWeese
J. Leatherwood
BT6005/55-58