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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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February 25, 1991

TO: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Jess Kelley, Reclamation Engineer *JK*

RE: Ten-Day Letter #X-91-02-370-002 TV1 Regarding Possible Permit Defect-
-Failure of Division to Show That Criteria for Highwall Retention Have
Been Met in Areas Above Seam Backfills, CALMAT Company, Hidden
Valley Mine, ACT/015/007, Folder #2, Emery County, Utah

SYNOPSIS

On February 19, 1991, the Division received a Ten-Day Letter (TDL) from the Office of Surface Mining (OSM). The TDL was sent as a result of a Random Sample Inspection of the Hidden Valley site made by OSM representative Mitchell S. Rolling on December 12, 1990. The TDL states that OSM believes the Hidden Valley permit to be defective because it improperly allows for the retention of highwalls above the 'A' and 'B' portal fills. The remarks from OSM which accompany the TDL mention only the 'A' seam, but the TDL itself states that the location of the problem is "all highwalls and lands upon which spoil has been placed on the permitted area."

ANALYSIS

The areas above the seam fills were mentioned in a November 14, 1990 memorandum from Division Biologist Susan White to Pamela Grubaugh-Littig, Division Permit Supervisor. In that memorandum, Ms. White expressed concern that the areas were not shown as highwalls on final reclamation maps and that the maps were, therefore, deficient. On November 21, 1990, the Division sent a copy of the memorandum to Karla Knoop of JBR Consultants Group, who superintends the site for the permittee. In a letter dated December 18, 1990, Ms. Knoop responded that the areas in question are not highwall areas at all. The area above the 'A' seam, she explained, is a diversion cut which was put in at the time of bulk sampling while the area above the 'B' seam is an old road surface. Both have been retained as permanent diversions to direct runoff away from the backfilled areas.

This writer agrees with Ms. Knoop's assertion that the areas in question are not highwall areas and should not, therefore, be treated as such. The Division has an extensive photographic record of the entire Hidden Valley site from 1979 to the present. One photograph, taken September 4, 1986, clearly shows the 'A' seam diversion during bulk sampling. In the photograph, the diversion is seen to traverse a natural bench above the portal and appears to have been cut into the talus at the base of the ledge above the bench. Another photograph, taken June 13, 1980, shows the area above the 'B' seam prior to any disturbance. This photograph shows that the area where the road was eventually placed was originally a natural ledge face and not a manmade highwall. As with the 'A' seam diversion, the road above the 'B' seam was also made by displacing the talus at the base of the ledge face. R614-100-200 defines a highwall as "the face of exposed overburden and/or coal in an open cut of a surface coal mining and reclamation activities (sic) or for entry to underground coal mining activities." By this definition, and given the photographic record, clearly neither of the areas in question qualifies as a highwall.

R614-301-553.100 states that disturbed areas must be backfilled and graded to ". . . achieve a minimum long-term static safety factor of 1.3 and . . . [m]inimize erosion and water pollution both on and off the site . . ." Backfilling the areas in question would defeat these goals in two ways. First, the safety factor of the fills would be decreased because the fill slopes would have to be steepened. Page 18 of the Mine Plan states that the calculated safety factors for the 'A' and 'B' seams are, respectively, 1.354 and 1.353. Any steepening of the fill slopes would lead to a static safety factor of less than the required 1.3 and could jeopardize the stability of the fills. Second, the permanent diversions are necessary to prevent erosion of the fills. The fills consist of unconsolidated material placed at the base of bare sandstone cliffs. Without the diversions, high velocity runoff from the bare sandstone would seriously erode the fills, impeding revegetation and adding to the sediment load of Ivie Creek, which runs adjacent to the Hidden Valley site.

RECOMMENDATIONS

The Division should request that a representative from OSM visit the Division, view the photographic record of the Hidden Valley site, and then visit the site in the company of Division representatives, including this writer. In this way, OSM could better assess the validity of the claims made in this memorandum as well as the adequacy of the approved Mine Plan.