0047

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

Norman H. Bangerter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

October 26, 1988

Mr. Andy King
Genwal Coal Company
P.O. Box 1201
Huntington, Utah 84528

Dear Mr. King:

Re: Determination of Completeness and Technical Deficiency Reviews, Permit Renewal and New Lease Addition, Genwal Coal Company, Crandall Canyon Mine, ACT/015/032, Folder #2, Emery County, Utah

The Division has finished its review of materials received August 8, 1988 regarding both the permit renewal and the proposed lease addition (U-54762) for the Crandall Canyon Mine. There are deficiencies remaining that must be adequately addressed before a final approval for either action can be given. These are delineated in the attached review document.

However, the Division has determined that the Mining and Reclamation Plan (MRP) is complete enough that Genwal may publish notice of both actions, as required by UMC 786.11.

Please respond to these remaining deficiencies by November 25, 1988 so that documentation necessary for final approval of both actions may be put together.

Please note that the U.S. Forest Service, Manti-LaSal National Forest, has also identified issues which need to be addressed before they can concur with the permitting actions. Their concerns will be sent to you shortly so that you can respond within the above-mentioned time frame.

an equal opportunity employer

Please don't hesitate to contact me or James Leatherwood if you have any questions.

Sincerely,

Susan C. Linner

Susan C. Linner
Reclamation Biologist/
Permit Supervisor

cl
Attachment
cc: G. Morris, Manti-LaSal N.F.
R. White, Earthfax
B Team
BT45/47-48

PERMIT RENEWAL

GENWAL COAL COMPANY
CRANDALL CANYON MINE
ACT/015/032

DETERMINATION OF COMPLETENESS REVIEW

UMC 771.23 Permit Applications: General Requirements for Format and Contents -JSL, LK

As previously requested in a conditional approval of the irrigation plan, page 3-36 of the Mining and Reclamation Plan (MRP) must be updated to reflect the required irrigation plan that was based on the percent cover.

Section 3.5 (page 3-27) indicates that there are 87.46 acres in the permit area. This apparently does not include the acreage for the total permit area or the proposed new lease area. This needs to be provided.

UMC 783.15 Ground Water Information - DWD

The operator was requested to provide sufficient information to establish the characteristics of the aquifers and submit potentiometric surface data to identify the gradient of ground water within the Star Point Sandstone.

Table 7-1 supplies part of the information needed to characterize ground water sources of the surrounding formations.

The operator references page 7-29 and Section 7.1.6. Section 7.1.6 outlines a spring monitoring plan to analyze ground water conditions. Still, this information when supplied will not identify the potentiometric surface and extent of the Star Point Aquifer.

Although the Division realizes that obtaining the information on the Star Point Aquifer will be somewhat inconvenient, we contend that the information is necessary and not exceptionally expensive to obtain. We therefore restate our requirement to implement at least two drill stations within the existing mine workings so that a three point problem can be performed to establish the piezometric surface and gradient of the Star Point Aquifer. One of the monitoring sites should be placed at the most western point of 2nd West where possible and practicable. The other monitoring site should be placed in the northern most part of the North Mains.

UMC 783.20 Fish and Wildlife Resources Information - LK

The use of wildlife of the permit area as discussed in Section 4.4.2 of the MRP refers only to big game. This needs to be corrected to refer to wildlife in general as using the permit area.

UMC 783.25 Cross-Sections, Maps, and Plans - DWD

The operator needs to update the mine sequence maps for the mining areas in Tract 2 that the operator has proposed to delete.

UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance - DWD

On page 7-41 the operator discusses the infeasibility of installing additional monitoring wells.

Since mine expansion to the north is likely in the future and there is a potential that this mining could have effects on the springs, there is continuing need to obtain an understanding of the characteristics of the Star Point Aquifer in the area. As stated under UMC 783.15, the Division's concerns over the Star Point Aquifer in this area surpass the conceived burden to the operator for constructing and monitoring the in-mine wells.

The operator shall submit plans to study and analyze the Star Point aquifer for areal extent and piezometric levels on and adjacent to the mine plan area. The operator will be required to construct two in-mine wells to obtain sufficient data to establish a potentiometric water level in the mine.

UMC 784.23 Operation Plan: Maps and Plans - JSL

The operator must clarify the intent of the three trailers to be used as temporary warehouse, office building and rockdust supply facilities. If these facilities are to be utilized, plate 3-1 must be updated to reflect the location of such facilities. If the trailers are not to be used, then the MRP must be updated by removing the discussion pertaining to the three temporary facilities.

TECHNICAL DEFICIENCIES

UMC 817.41 Hydrologic Balance: General Requirements - DWD

See section UMC 783.15. The operator has addressed collection and reporting of ground water monitoring data and information on page 7-41. The operator needs to discuss monitoring of additional wells.

The operator needs to provide, in the MRP, a current summary of all ground water data.

UMC 817.43 Hydrologic Balance: Diversions and Conveyance of Overland Flow, Shallow Ground Water Flow, and Ephermeral Streams - MD

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 operator 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.

UMC 817.45 Hydrologic Balance: Sediment Control Measures -MD

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 operator 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 reqirement 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.

UMC 817.52 Hydrologic Balance: Surface and Ground Water Monitoring - MD

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 inch 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 December 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.

UMC 817.71 Disposal of Excess Spoil and Underground Development Waste: General Requirements - JRH

UMC 817.72 Disposal of Underground Development Waste and Excess Spoil: Valley Fills -JRH

UMC 817.73 Disposal of Underground Development Waste and Excess Spoil: Head-of-Hollow Fills - JRH

UMC 817.74 Disposal of Underground Development Waste and Excess Spoil: Durable Rock Fills - JRH

This section is not considered to be adequate.

The operator has referenced these sections of the regulation to Section 3.3.9 of the MRP.

The operator has not conducted a mass balance of the site in order to determine whether or not there is an excess of spoil or mine development waste on the site in conjunction with reclamation. It is evident that due to the allowance of leaving the Forest Service road in conjunction with post-mining facilities, there will most likely be a shortage of materials on the site needed to perform reclamation work. The operator needs to address the requirements of this section in conjunction with the requirements of UMC 817.101 Backfilling and Grading.

The operator has indicated in this section that underground development waste will be returned to underground workings, however, no determination as to the handling of mine development waste in conjunction with the development and construction of the surface facilities has been accomplished in the MRP.

UMC 817.101 Backfilling and Grading: General Requirements - JRH

This section is not considered to be adequate.

The operator has referenced this section of the regulations to Part 3.5.4 of the MRP and plates 3-1 and 3-5.

The operator has included in the MRP, cut and fill calculations for portions of the site to be reclaimed. These calculations are found in Item 3-12. However these calculations indicate a shortage of material of approximately 10,000 cubic yards of fill required for the site.

No reference as to the mass balance of the materials required for backfilling and grading is made in the MRP. The operator must provide earthwork calculations and a mass balance for the backfilling and grading to be accomplished on the site. The operator shall include suitable cross sections indicating the pre-mining, the mining, and the post-reclamation sections of the site in order to show the cut and fill requirements and in order to determine whether or not the operator has met approximate original contour requirements for the site.

Earthwork calculations shall also include a mass balance for topsoil requirements on the site. These, and the general earthwork calculations, can be provided as part of the bonding calculations, which will further require equipment selection and productivity calculations for the backfilling and grading in order to determine the adequacy of the reclamation bond.

In those areas where complete reduction of highwalls along cuts, pads, portals and embankments is not to be accomplished, the operator shall be required to provide justification for the remaining highwall. This justification shall include, but not be limited to, stability analysis of the highwall and the fill material to be backfilled.

NEW LEASE U-54762

DETERMINATION OF COMPLETENESS REVIEW

UMC 783.12 General Environmental Resources Information - JSL

A cultural resources survey of areas not previously surveyed should be conducted to make a determination on historic properties.

UMC 783.24 Maps: General Requirements - JSL

The permit boundary delineation for lease U54762 on Plate 2-1 and 3-3 is different than plates 2-2 and 3-10. The MRP must include the correct legal permit lease boundary.

UMC 784.21 Fish and Wildlife Plan - LK

The MRP does not address the potential impacts on raptor nests due to subsidence, nor does it propose appropriate mitigation for impacts. This must be addressed adequately before the new lease area can be approved.

UMC 786.11 Public Notices of Filing of Permit Applications - JSL

The MRP must include a revised public notice newspaper advertisement to include the new lease area, U054762. This public notice must contain all pertinent information as required under UMC 786.11.

TECHNICAL DEFICIENCIES

UMC 817.52 Hydrologic Balance: Surface and Ground Water Monitoring - MD

The applicant 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 rule UMC 783.15. The Division has determined that the applicant must install two bore holes in the mine to provide additional ground water monitoring points (See Review Section 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 applicant 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.

The sampling procedure for ground water monitoring is not included in the MRP. The applicant 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 to 5 casing volumes of water prior to collecting any samples.

BT45/40-46