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

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TO: Susan C. Linner, Permit Supervisor

FROM: Randy Harden, Reclamation Engineer

RE: Five-Year Permit Renewal Review, Deficiency Review, Genwal Coal Company, Crandall Canyon Mine, ACT/015/032, Folder #2, Emery County, Utah

The following comments are to be incorporated into the five-year permit renewal review for Genwal Coal Company's Crandall Canyon Mine:

UMC 771.23 Permit Applications - General Requirements for Format and Contents - JRH

This section is considered to be complete.

The operator has included the regulation-by-regulation cross reference as requested by the Division. The in inclusion of this reference and significant corrections to the text and drawings is sufficient to allow for detailed review of the MRP.

UMC 782.18 Personal Injury and Property Damage Insurance Information - JRH

This section is considered to be complete.

Verification of liability insurance is found as Item 2-8 of the MRP. The operator has provided the form as requested by the Division and the insurance coverage is considered to be good until cancelled, upon thirty (30) days' written notification to the Division. This section is considered to be complete.

UMC 783.12 General Environmental Resource Information - JRH

This section is considered to be complete.

General environmental resource information is found in the MRP in sections 3.2.10; 3.2.11; 3.2.12; 3.3.6; 3.3.6.1; 3.3.7; 3.3.7.1; 3.3.7.2; 3.3.8; 3.3.8.1; 3.4.2.1; and Plate 3-3. Plate 3-2 was eliminated from the MRP.

The narrative description of the mining operations for the Crandall Canyon Mine is considered to be adequate. The operator expects to produce approximately 360,000 tons per year for the permit term.

Modifications from the existing plan include the addition of a fifth portal to the mine in conjunction with the construction of an underground bathhouse facility. No other portals, shafts or breakouts are planned or provided for within the permit term for the mining operations.

The mining methods used at the Crandall Canyon Mine consist of conventional room and pillar mining with continuous miners. The operator estimates that more than 50% of the mineable coal reserves will be recovered during mining operations. The Hiawatha seam is considered to be the only mineable seam within the permit area. An additional seam, the Blind Canyon seam is not considered to be mineable, since its thickness generally ranges less than five feet.

The operator has noted that the future reserves beyond the permit term are difficult to predict, owing to the BLM lease areas which encompass the site. Depending on the availability and the marketability of the coal in these areas, potentially all of the surrounding coal leases could be incorporated into the future mining projections for the Crandall Canyon Mine.

UMC 783.24-25 Maps: General Requirements, Cross Sections, Maps, and Plans - JRH

This section is considered to be complete.

UMC 784.11 Operation Plan: General Requirements - JRH

This section is considered to be complete.

Information regarding the general requirements of the operational plan for the Crandall Canyon Mine are found in sections 3.2; 3.2.1 through 3.2.13; 3.3.1; 7.2.4; 7.2.5; plates 3-1 through 3-4; and figures 7-11 through 7-13.

The operator has provided a narrative description of the coal mining procedures and the construction, modification and use of those facilities to be used in conjunction with mining operations.

The operator has incorporated into the MRP, the construction and use of coal screening, crushing and loadout facilities within the existing disturbed area. While these facilities were not part of the previous MRP for the prior permit term, the operator wishes to include these facilities in conjunction with those facilities already existing on the site.

The operator has provided suitable drawings of the proposed coal processing and loadout plant on the site, and the review and the approval of these additions has been incorporated into the five-year permit renewal.

This section is considered to be complete. However, additional comments relating to technical deficiencies found within the general operational plan may be found elsewhere.

UMC 784.12 Operation Plan: Existing Structures - JRH

This section is considered complete.

Information regarding this section of the regulations is found in section 3.2.3 of the MRP.

The operator indicates that there were no previously exiting structures prior to the construction of the mine site.

UMC 784.13 Reclamation Plan: General Requirements - JRH

This section is considered to be complete.

Information regarding this section is referenced in sections 3.5; 11.4; items 11-1, 11-2, and Plates 3-1 and 3-5 of the MRP.

UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance - JRH

This section is considered to be complete.

Information regarding this section of the regulations is referenced in sections 3.5; 7.1; 7.2; Plates 3-1 and 3-5, and figures 7-12 and 7-13 of the MRP.

With regard to mine portal closures only, the operator is considered to be in compliance with the requirements of this section. The operator has proposed that an underdrain be installed in conjunction with the portal of lowest elevation. Depending on the determination of mineflow upon cessation of mining operations, the operator shall design the drain accordingly. It is not anticipated that the mine drainage will be acid- or toxic-forming in nature, but, in the event that such conditions are encountered upon final reclamation, appropriate measures will be taken in order to ensure compliance.

UMC 784.16 Reclamation Plan: Ponds, Impoundments, Banks, Dams and Embankments - JRH

This section is considered to be complete.

The operator intends to reclaim the sediment pond in conjunction with Phase II reclamation on the site. The operator's description of this activity is considered to be adequate.

UMC 784.18 Relocation or Use of Public Roads - JRH

This section is considered to be complete.

Information referenced in the MRP regarding the relocation or use of public roads, is found in sections 2.4; 3.2; 3.2.10, and Item 2-3.

The plan indicates that the operator did provide notice to the public for a permit to conduct mining activities within 100 feet of a public road. The public road consists of a Forest Service Development Road.

UMC 784.19 Underground Development Waste - JRH

This section is considered to be complete.

The operator has referenced Section 3.3.9 and 3.3.9.1 of the MRP regarding the disposal of underground development waste.

The operator has indicated that permanent storage of all excess spoil and underground development waste, including sediment pond waste, will be disposed of in the underground mine workings. Temporary storage of any materials brought to the surface, and the sediment pond waste, shall be located at the west end of the coal stockpile. This section is considered to be complete and adequate. However, the operator should realize that in the event that MSHA disallows the storage or disposal of any of this waste material, that a suitable location within the permit area must be determined and approved prior to disposal. Due to the limited amount of surface storage area, such requirements may prove to hamper mining operations during a permitting process for the location of permanent waste disposal facilities on the surface. In no event shall the Division allow for this material to be permanently disposed of outside a permitted area or in a landfill.

UMC 784.23 Operation Plan: Maps and Plans - JRH

This section is considered to be complete.

The operator has referenced Plates 2-1; 3-1; 3-2; 3-3; 3-5; 3-8; 3-9; 12-2; 12-3, and Figure 7-13 and 7-14 regarding the operation plan requirements for maps and plans.

Refer also to comments made under UMC 783.24-.25 for additional comments regarding maps and plans.

The operator has provided operation plan drawings to the Division delineating buildings; utilities and facilities to be used in conjunction with mining operations; bonding areas; coal handling facilities; topsoil and waste storage and disposal areas; and also including water handling and treatment facilities. The operator has submitted sufficient drawings in order to determine this section complete.

UMC 784.24 Transportation Facilities - JRH

This section is considered to be complete.

Information regarding this section of the regulations is referenced by the operator in sections 2.4, 3.2.10 and Plate 3-1 of the MRP.

Other transportation facilities in the MRP include the conveyor from the mine portal, and the coal processing and loadout facilities. The MRP has been modified from the previous permit term to include the coal processing as proposed in the MRP.

These facilities are provided on the drawings, and a narrative description is found within the text of the MRP. A flow sheet of the coal plant is provided on Plate 3-11, which indicates a throughput of 1500 TPD of run-of-mine coal. The plant is primarily a screening plant, with some crushing capacity for stoker coal. No coal flotation or separation will occur in conjunction with the operation of the plant, and no generation of waste material is expected. Fines are collected into a 2" minus, 250 ton bin; and 3/8" to 1 1/4" stoker coal is stored in a 100-ton capacity bin. Lump coal screened at +5" will be heaped in a small coal storage ladder adjacent to the storage bins. Loading of the trucks will be by conveyor via a loadout chute into the trucks. This configuration is a notable improvement in coal handling facilities over the existing surface stockpile and use of a front-end loader for truck loadout.

UMC 784.25 Return of Coal Processing Waste To Underground Workings - JRH

This section is considered to be complete.

Information regarding the return of coal processing waste to underground workings is referenced by the operator, to Section 3.3.9 of the MRP.

The operator indicates that coal processing waste will be returned to the underground workings. The material is to be disposed of along the pillar lines and will be similar in nature to the natural material generated during the pillaring process. No additional leachate will be formed other than that already associated with the retreat mining. All disposal will be accomplished in accordance with MSHA regulations.

UMC 817.13 Casing and Sealing of Exposed Underground Openings: General Requirements - JRH

UMC 817.14 Casing and Sealing of Exposed Underground Openings: Temporary - JRH

UMC 817.15 Casing and Sealing of Exposed Underground Openings: Permanent - JRH

This section is considered to be adequate.

In addition to the underdrain design (as commented on under UMC 784.14), the operator intends to install an MSHA-approved block stopping in each of the entries in conjunction with backfilling of the portals. Additionally, due to the large face-up of the portals along the highwall, additional fill material will be used to provide additional cover over the portals in conjunction with mitigation of the highwalls.

With regard to temporary closure of the mine openings, the operator has indicated that barricades or other covering devices will be utilized in conjunction with the posting of signs indicating the hazardous nature of the mine openings.

No backfilling quantities or equipment used for the backfilling of the portals was provided in the MRP. Refer to requirements under UMC 817.101 regarding backfilling and grading of the portal areas.

UMC 817.46 Hydrologic Balance: Sedimentation Ponds - JRH

This section is considered to be adequate.

Information regarding this section of the regulations is found in Section 7.2 and Figure 7-10 of the MRP. This reference to sedimentation pond design and construction is not complete.

The operator has committed to monitor the piesometer quarterly in order to ensure embankment stability and has included a mitigation plan in the event that the phreatic level in the pond embankment rises to a point where stability is threatened.

UMC 817.61-68 Use of Explosives - JRH

This section is considered to be adequate.

Information regarding the use of explosives is found in Section 3.3.5.4 of the MRP.

The operator has sufficiently addressed the requirements of this section. Only limited use of explosives on the surface and underground is expected. The location of the powder and primer magazines is located on Plate 3-1. The operator has committed to perform blasting operations in accordance with applicable state, local and federal requirements. This section is considered to be complete.

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 the Forest Service road in conjunction with post-mining facilities, there will most likely be a shortage of materials on the site, in order 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 that underground development waste will be returned to underground workings in this section, 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 817.81 Coal Processing Waste Banks: General Requirements - JRH

UMC 817.82 Coal Processing Waste Banks: Site Inspection - JRH

UMC 817.83 Coal Processing Waste Banks: Water Control Measures - JRH

UMC 817.85 Coal Processing Waste Banks: Construction Requirements - JRH

UMC 817.86 Coal Processing Waste: Burning - JRH

UMC 817.87 Coal Processing Waste: Burned Waste Utilization - JRH

UMC 817.88 Coal Processing Waste: Return to Underground Workings - JRH

UMC 817.91 Coal Processing Waste: Dams and Embankments: General Requirements - JRH

UMC 817.92 Coal Processing Waste: Dams and Embankments: Site Preparation - JRH

UMC 817.93 Coal Processing Waste: Dams and Embankments: Design and Construction - JRH

This section is considered to be adequate.

The operator has referenced section 3.3.9 of the plan.

The operator has identified the waste materials which are to be developed on the site. There will be no coal processing waste material or coal processing waste embankments developed on the site.

UMC 817.89 Disposal of Non-Coal Wastes - JRH

This section is considered to be adequate.

Reference to this section of the regulation is found in Part 3.3.9 of the MRP.

The operator has indicated that non-coal waste material will be stored in containers on the site and will be transported to a landfill. The operator has also committed to properly handle and dispose of other waste materials if and when they are encountered (such as oil and grease, toxic and hazardous waste, and liquid waste). Sanitary waste will be stored in a holding tank and will be pumped out and disposed of by a licensed contractor when required.

UMC 817.99 Slides and Other Damage - JRH

This section of the MRP is considered to be adequate.

The operator has addressed the requirements of this section in parts 12.4 and 12.5 of the MRP.

The referenced section of the MRP does not meet the requirements of this section. The operator needs to provide a commitment in the MRP indicating that he will notify the Division in the event of any slide or other damage which may have a potential adverse effect on public property, health, safety, or the environment. Please include such a commitment in the MRP. This section is not considered to be complete.

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 reclamated. 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 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.

This section is not considered to be complete or technically adequate.

UMC 817.103 Backfilling and Grading: Covering Coal and Acid- and Toxic-Forming Materials - JRH

This section is considered to be adequate.

The operator has indicated that all waste materials derived from coal waste or sediment pond waste will be returned to the underground workings. These materials will be placed along the pillar lines prior to second mining or placed in areas where no second mining is anticipated. Since no materials will be disposed of on the surface, no cover requirements will be needed for the materials.

UMC 817.150-.156 Class I Roads - JRH

UMC 817.160-.166 Class II Roads - JRH

UMC 817.170-.176 Class III Roads - JRH

This section is considered to be adequate.

References made by the operator to roads is in Section 3.2.10 and Plate 3-1 of the MRP.

The operator has categorized the roads within the permit area. The Forest Service Road is classified as a Class I road through the surface facilities. The operator has further indicated that this road will remain as part of the post-mining land use, in accordance with the approval of the Forest Service. The operator needs to incorporate into the MRP, documentation from the Forest Service of approval for this road to remain. Additionally, those other features which are to remain as part of the post-mining land use should also be included in the approval by the Forest Service, including, but not limited to, the parking area and other pads which are to be left upon reclamation.

The operator indicates that the parameters and the requirements for the design and the construction of the Class I haul road were in accordance with the requirements of the Forest Service. There are currently production limitations issued by Air Quality on the existing haul road. The operator has included those conditions and approvals as necessary in order to maintain and assure the Division that compliance has been accomplished with the other agencies involved.

UMC 817.180 Other Transportation Facilities - JRH

This section is considered to be adequate.

The operator has referenced the requirements of this section to Section 3.2.10 of the MRP and to Plate 3-1.

The description of the coal screening and loadout facilities have been included in the MRP. Approvals for the new facilities as proposed is also be required by the Forest Service and by Air Quality.

In general, the location and the design of the loadout facilities meet the requirements of the Division. The new structures are to be constructed within the existing disturbed area boundary and will not significantly contribute additional runoff or sediment volume to the sediment pond.

The identification of the structures and their use is found on Plate 3-1, and a description is found for the use and the reclamation of the facilities within the MRP.

UMC 817.181 Support Facilities and Utility Installations - JRH

This section is considered to be adequate.

Refer to comments made under UMC 817.180.

cc: B Team
WPOB18/17-28