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Norman H. Bangerter
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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
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Salt Lake City, Utah 84180-1203
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August 7, 1989

Mr. William J. Dunn
Senior Engineer
Consolidation Coal Company
12755 Olive Boulevard
St. Louis, MO 63141

Dear Mr. Dunn:

Re: Deficiency, Amendment, New Portals, Consolidation Coal Company, Emery Deep Mine, ACT/015/015-89(C), Folder #2, Emery County, Utah

The Division has completed review of your company's submittal received June 28, 1989. The plans were reviewed by the Division's technical staff. Please resolve the following deficiencies as outlined in the attached memo by September 5, 1989. Please format your response for insertion into the Mining and Reclamation Plan.

If you have any questions, please call Lynn Kunzler or me.

Sincerely,

Susan C. Linner

Susan C. Linner
Reclamation Biologist/
Permit Supervisor

cl
Attachments
cc: C. Jones, Emery Mine
J. Helfrich
L. Kunzler
BT45/276

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August 7, 1989

TO: Susan Linner, Permit Supervisor

FROM: Mike DeWeese, Reclamation Hydrologist MD

RE: New Portal Amendment, Consolidation Coal Company, Emery Deep Mine, ACT/015/015-89C, Folder #2, Emery County, Utah

SUMMARY:

The Division has reviewed the operator's proposed amendment received June 28, 1989 regarding hydrologic issues. This amendment presents plans to construct a new portal facility on the eastern portion of the approved permit area. The submittal is not considered technically adequate at present.

ANALYSIS:

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

The proposed runoff control design is based on the assumption that the newly disturbed area will be classified as a small area exemption (SAE). The operator states on page 3-23 that the current disturbed acreage is 40 acres. The additional disturbance from the new portal facilities (5.3 acres) would increase the total SAE acreage to 14.02 acres or 31% of the new total disturbed acreage (45.3 acres). Division policy defines SAE's as small areas which total no more than 15% of the total disturbed acreage. Therefore, the proposed sediment control plan implementing alternate sediment control throughout the entire site is not appropriate. The operator must submit designs for a sedimentation pond pursuant to the design criteria enumerated in UMC 817.46 and UMC 817.49 which will be utilized as the primary sediment control facility for the new portal disturbance.

The topsoil stockpile will increase the total SAE acreage by less than one acre and may be classified as an SAE. The topsoil stockpile will be bermed and revegetated. In addition, the operator must install a silt fence or equivalent treatment structure at the lowest point of the berm to provide a spillway for the treated runoff. As an alternative, the operator may submit design specifications of the stockpile berm demonstrating total containment of the design storm runoff. Surface runoff from the rock dust bin will be directed into the excavated area by grading the surface. Any runoff from the ramp excavation will be contained on site or enter the mine workings and ultimately be discharged into existing sedimentation ponds. Therefore SAE status is not required for the rock dust bin and the excavated ramp area.

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

The proposed portals are to be constructed as an incised structure accessed by a ramp from the surface. Subsoil and bedrock material produced by excavating this structure will be stockpiled around the perimeter of the excavated area. Surface runoff from the stockpiles will be contained and diverted to a treatment structure by three foot high berms around the outer perimeters. These berms were designed based on containment of the total expected runoff volume from the 10 year 24 hour precipitation event. The berms therefore contain adequate capacity to convey the design storm. However the stockpiles will not be constructed on a level site and the berms will therefore function as diversion channels to convey runoff downslope to the treatment structure. The operator must also submit calculations demonstrating that the diversion channel around the stockpiles will convey the runoff from the design storm without producing erosive velocities.

Construction of the portals will require diverting a small ephemeral tributary to Christiansen wash. This diversion will extend approximately 580 feet (page 13-103) along the southeast disturbance boundary. The operator has calculated the 100 year 24 hour design storm peak runoff to be 103.4 cfs. Division calculations determined this value to be 194.25 cfs. This difference appears to be primarily due to the operator using average channel slope instead of average land slope in the calculations. This produces a lower slope and subsequently a smaller peak flow. The proposed channel dimensions presented in figure 13-2 require a

total channel depth of five feet and channel bottom width of six feet. Division calculations have demonstrated that this channel configuration will convey the design storm peak of 194.25 cfs at 3.53 feet flow depth and a velocity of 5.77 ft./second. Thus, the diversion will convey the maximum flow with 1.5 feet of freeboard. The diversion will be constructed with a sandstone bedrock channel bottom (page 13-103) and will be stable at the calculated velocity. However no calculations were presented for channel sideslope stability.

The aforementioned regulation requires that permanent diversion channel sideslopes be vegetated. Division calculations for the 10 year 24 hour design storm produce a peak flow of 68.90 cfs. The proposed diversion channel will convey this discharge at a flow depth of 2.0 feet. Ten years is considered ample time to establish vegetative cover on the channel sideslopes above the two foot depth, therefore interim sediment control on sideslopes above two feet is not necessary. However if the soil profile above the channel exceeds three feet in depth the operator must submit designs based on the 100 year 24 hour storm event for a protective lining on the channel sideslopes, or adequately demonstrate that this measure is not necessary.

The operator must submit designs for an energy dissipator at the diversion-stream channel contact or adequately demonstrate that this structure is not necessary. In addition, the operator must submit a design for inlet protection at the entrance of the diversion channel or demonstrate that this measure is unnecessary.

UMC 817.55 Hydrologic Balance: Discharge of Water Into an Underground Mine - MMD

Surface runoff from the rock dust bin and excavated area will be report to the bottom of the portal access pad. Any discharge into the portals will be negligible and will ultimately be treated at existing mine water discharge facilities.

RECOMMENDATIONS:

The Division recommends that the proposed new portal facilities be denied final approval until the operator has submitted plans adequately addressing the above-referenced deficiencies.

BT98/57-59

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August 7 1989

TO: Sue Linner, Permit Supervisor

FROM: Randy Harden, Reclamation Engineer

RE: 4 East Mine Access Portals Proposal, Emery Mine, Consolidation Coal Company, ACT/015/015-89C, Folder #2, Emery County, Utah

SUMMARY:

Consolidation Coal Company proposes to construct a new set of portals at the Emery Mine. A proposal for an amendment to the existing mining and reclamation plan was submitted to the Division on June 28, 1989. The following comments are made regarding deficiencies found in that proposal:

ANALYSIS:

UMC 784.11 Operation Plan: General Requirements - JRH

In accordance with part (b) of this section, the operator is required to provide for the design, construction, modification and removal of mine development waste facilities. These facilities need to be design and certified under the requirements of the regulations under UMC 784.23(c)(2) and require the certification of a registered professional engineer.

The maps and designs proposed in the amendment for the new portal facilities are not certified in accordance with the requirements of the regulations.

The design of the spoil banks and berms surrounding the portal cut is not considered adequate. Refer to figure no. 13-3 as submitted by the operator. The slopes of the banks (proposed at 1:1) is steeper than the angle of repose for the material. In accordance with the general requirements for backfilling and grading under section UMC 817.101, these slopes should be reduced to 2h:1v.

Additionally, the perimeter berms and ditches around the spoil piles are also considered unsuitable because of the steep slope designs provided by the operator. These ditches and berms should be redesigned in a manner that will allow ease in construction, and maintenance of the facilities. The side slopes of the ditches and the berms should also be reduced to 2h:1v.

No stability information was provided in the proposal regarding the slopes of the portal cut. Although these highwalls will be eliminated during reclamation, the operator should account for the stability of these highwalls during the operations phase of the permit. If the proposed design for the highwall construction meets the requirements and the approval of MSHA for the operational phases of these facilities, the Division will consider the design to be adequate.

UMC 784.13 Reclamation Plan: General Requirements - JRH

The reclamation plan does not account for the compaction of the material to be backfilled in the portal cut. Costs are based on bulldozers pushing the material into the cut from the proposed spoil piles. The operator must develop a design and a plan for the placement and compaction of the material to be backfilled into the portal cut.

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

The operator has not adequately addressed the requirements of this section of the regulations. Primarily, the operator need to account for the sealing of the openings in a manner that will prevent the flow of water into or out of the reclaimed openings.

Backfilling of the portals for a distance of at least 25 feet from the brow of the portal should also be incorporated into the reclamation plan and the costs associated with the closure of these openings. The backfilling of these openings must be in accordance with the requirements of MSHA regulations.

RECOMMENDATIONS:

The operator needs to resubmit the proposal to account for the above deficiencies. In regard to Mike DeWeese's comments regarding sediment control, it appears that significant changes in the proposed design will have to be made prior to approval. These changes primarily deal with the stockpiling of the mine development waste, the berms and ditches surrounding that material and the installation of a sediment pond in conjunction with the operation of the facility.

cc: B TEAM
BT17/16-17

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July 3, 1989

TO: Susan C. Linner, Permit Supervisor

FROM: James Leatherwood, Reclamation Soils Scientist

RE: New Portals, Consolidation Coal Company, Emery Deep Mine, ACT/015/015-89(C), Folder #2, Emery County, Utah

SUMMARY:

The Emery Deep Mine New Portal Development Plan, received June 28, 1989, has been reviewed. The following outline concerns that must be addressed.

DISCUSSION:

UMC 783.14(a)(1)(iii) Geology Description - JSL

Analysis given on page 13-99 does not include the 56.1 to 79.2 foot sample point. Chemical analysis of the material to be removed, including the strata immediately below the area to be removed, must be included within the submittal.

UMC 784.13(b)(7) Reclamation plan: General Requirements - JSL

The proposed excavation must include plans to dispose of coal waste and/or materials considered to be acid- or toxic-forming or combustible within the approved underground development waste disposal area within thirty days (UMC 817.48) of exposure.

UMC 817.23 Topsoil Storage - JSL

The proposed plan does not define a specific proposed topsoil stockpile seed mix. A seed mix for topsoil stockpile protection must be specified. In addition, the plans should include vegetation of the excavated stockpiles to reduce possible wind erosion.

Potential runoff from the topsoil stockpile does not route through a sediment pond. The proposed plan must include designs, similar to the excavated stockpiles, to contain potential runoff and soil erosion.

RECOMMENDATIONS:

The above stated concerns must be completely and adequately addressed prior to final unconditional approval.

cl
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