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TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

December 2, 2010

TO: Internal File

THRU: Jim Smith, Lead JS 8Dec 2010

FROM: Kevin Lundmark, Hydrologist KWL

RE: Replace Fan Breakout with Ventilation Breakouts, UtahAmerican Energy Inc., Horse Canyon Mine (Lila Extension), C0070013, Task ID# 3669

SUMMARY:

On November 9, 2010 the Division received a permit amendment UtahAmerican Energy, Inc. (UEI) to move the ventilation fan to the #0 portal and develop five ventilation breakouts along the coal outcrop. This Technical Memorandum provides a review of the amendment with respect to the hydrology requirements of the Utah R645 Coal Rules.

The application does not meet the requirements of the State of Utah R645 Coal Mining Rules and is not recommended for approval at this time. Prior to approval, the Permittee must address the following deficiencies:

R645-301-731.511 The Permittee must either remove the third sentence of the second paragraph of Section 5.1 (page 59) which states that "the majority of the runoff will run back into the mine"; or demonstrate that runoff entering the mine will meet the criteria of R645-301-731.511.

R645-301-731 The Permittee must show the proposed ventilation breakouts as alternative sediment control areas (ASCAs) on Plates 7-2 and 7-5.

R645-301-731, R645-301-121.200 The Permittee must identify the ventilation breakouts as disturbed areas on all plates in the MRP that show the disturbed area boundary and the locations of the ventilations breakouts. Plates in the approved MRP showing the disturbed area boundary and the locations of the ventilation breakouts include Plates 1-2, 2-1, 2-2, 2-3, 5-1A, 5-2, 5-6 7-2, 7-5 and 7-7.

TECHNICAL ANALYSIS:

OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Discharges Into an Underground Mine

The amendment identifies in Section 5.1 (page 59) that because the breakouts slope into the mine, the majority of any runoff from the breakout areas will "run back into the mine." Discharges into an underground mine are prohibited, unless specifically approved by the Division after a demonstration by the Permittee that the discharges will meet the following criteria (R645-301-731.511):

- Minimize disturbance to the hydrologic balance on the permit area, prevent material damage outside the permit area and otherwise eliminate public hazards resulting from coal mining and reclamation operations;
- Not result in a violation of applicable water quality standards or effluent limitations;
- Be at a known rate and quality which will meet the effluent limitations of R645-301-751 for pH and total suspended solids, except that the pH and total suspended solids limitations may be exceeded, if approved by the Division; and
- Meet with the approval of MSHA.

The amendment does not include a demonstration that the discharges will meet the criteria identified in R645-301-731.511. Section 731.510 - Discharges into an Underground Mine of the approved MRP states that "[t]here are no plans to discharge any water into an underground mine." Due to the location and topography at the proposed ventilation breakouts, there is little, if any, potential for surface runoff to enter the mine openings. However, in order for the proposed amendment to comply with the requirements of the Utah R645 Coal Rules, the Permittee must either:

a) Remove the third sentence of the second paragraph of Section 5.1 (page 59) which states that "the majority of the runoff will run back into the mine"; OR
b) Demonstrate that runoff entering the mine will meet the criteria of R645-301-731.511.

Gravity Discharges from Underground Mines

Section 731.521 – Portal Location of the amendment describes that gravity discharges are not expected from the access portals or ventilation breakouts. Based on site measurements and geologic data, the static water level elevation is estimated at approximately 5,990 ft in the mine area. The rock slopes of the access portals and ventilation breakouts will intercept the coal seam at approximately elevation 6,300 ft, which is 310 feet above the estimated static water level. The Permittee states that water monitoring results and historic data in the area indicate that it is unlikely that the water level in the mine would raise the 310 feet required for a gravity discharge to occur. The proposed ventilation breakouts would be at a higher elevation than the mine portals, therefore these breakouts will not increase the likelihood of a gravity discharge from the underground mine.

Sediment Control Measures

Section 5.1 and 742.200 of the amendment describe that alternative sediment control measures (silt fences and/or berms) will be used to provide sediment control at the ventilation breakouts. Section 5.1 indicates that the exact location of berms and / or silt fences will be determined in-field with the approval from the Division. The ventilation breakouts are identified as alternative sediment control areas (ASCAs) on Plate 5-2 but not on Plates 7-2 and 7-5. The proposed fan location at the #0 portal is within the disturbed area and sediment control is provided by the sedimentation pond.

Findings:

The amendment does not meet the minimum Hydrologic Information requirements of the Utah R645 Coal Mining Rules. Prior to approval, the Permittee must address the following deficiencies:

R645-301-731.511 The Permittee must either remove the third sentence of the second paragraph of Section 5.1 (page 59) which states that "the majority of the runoff will run back into the mine"; OR demonstrate that runoff entering the mine will meet the criteria of R645-301-731.511.

R645-301-731 The Permittee must show the proposed ventilation breakouts as alternative sediment control areas (ASCAs) on Plates 7-2 and 7-5.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

The amendment states that the ventilation breakouts will be developed from inside the mine and will therefore result in insignificant surface disturbance (Section 234.100 page 15 -16, Section 5.1 page 59). While the surface disturbance associated with the breakouts will be insignificant, the breakouts require bonding to cover reclamation and are therefore considered to be part of the disturbed area for the mine. The amendment includes revisions to Plates 5-2, 5-9, 7-2 and 7-5. The disturbed area boundary is shown and labeled on Plates 5-2, 7-2 and 7-5; however, the ventilation breakouts are not identified as disturbed areas. The disturbed area boundary in the location of the breakouts is also shown on the following plates in the MRP: 1-2, 2-1, 2-2, 2-3, 5-1A, 5-6 and 7-7. These plates also do not show the proposed ventilation breakouts as disturbed areas.

Findings:

The amendment does not meet the minimum Maps, Plans, and Cross Sections of Mining Operations requirements of the Utah R645 Coal Mining Rules. Prior to approval, the Permittee must address the following deficiency:

R645-301-731, R645-301-121.200 The Permittee must identify the ventilation breakouts as disturbed areas on all plates in the MRP that show the disturbed area boundary and the locations of the ventilations breakouts. Plates in the approved MRP showing the disturbed area boundary and the locations of the ventilations breakouts include Plates 1-2, 2-1, 2-2, 2-3, 5-1A, 5-2, 5-6 7-2, 7-5 and 7-7.

RECOMMENDATIONS:

The application does not meet the requirements of the State of Utah R645 Coal Mining Rules and is not recommended for approval at this time. The Permittee must address the deficiencies identified above prior to obtaining Division approval.

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