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TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

December 9, 2010

TO: Internal File

THRU: Jim Smith, Lead *DS 13 Dec 2010*

FROM: Kevin Lundmark, Hydrologist *KWC*

RE: Replace Fan Breakout with Ventilation Breakouts, UtahAmerican Energy Inc., Horse Canyon Mine (Lila Extension), C0070013, Task ID# 3705

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 (Task ID# 3669). The Division identified several deficiencies which required addressing by UEI prior to approval. UEI submitted a revised permit amendment package on December 8, 2010 (Task ID# 3705). This Technical Memorandum provides a review of the TID# 3705 amendment with respect to the hydrology requirements of the Utah R645 Coal Rules.

The application meets the requirements of the State of Utah R645 Coal Mining Rules and is recommended for approval at this time.

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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

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. Section 5.1 identifies that berms would be constructed at the ventilator breakouts to provide sediment control from these disturbances. The berms would also help prevent discharges into the mine at the ventilation breakouts.

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 relevant plates, including Plates 5-2, 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 meets the minimum Hydrologic Information requirements of the Utah R645 Coal Mining Rules.

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 MRP Plates 1-2, 2-1, 2-2, 2-3, 5-1A, 5-2, 5-6, 7-2, 7-5 and 7-7 that identify the ventilation breakouts as disturbed areas.

Findings:

The amendment meets the minimum Maps, Plans, and Cross Sections of Mining Operations requirements of the Utah R645 Coal Mining Rules.

RECOMMENDATIONS:

The application meets the requirements of the State of Utah R645 Coal Mining Rules and is recommended for approval at this time.