C0250005
Outgoing
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# State of Utah
**DEPARTMENT OF NATURAL RESOURCES**
MICHAEL R. STYLER
*Executive Director*
**Division of Oil, Gas and Mining**
JOHN R. BAZA
*Division Director*


September 13, 2011

Kirk Nicholes
Alton Coal Development, LLC
463 North 100 West, Suite 1
Cedar City, Utah 84720

Subject: Drainage Control Adjustments, Alton Coal Development LLC, Coal Hollow, C/025/0005, Task ID #3895, Outgoing File

Dear Mr. Nicholes:

The Division has completed a review of the drainage control amendment that was received on August 29, 2011. A copy of the technical review is attached. The drainage control amendment is hereby approved and we are returning a stamped, "incorporated" copy for your files. However, Alton Coal must address the two unresolved hydrology issues under a separate amendment. These issues have been pending since the summer. Please provide the following information on or before October 3, 2011:

1) **R645-724.500, 728.320,** Revise quarterly monitoring of wells Y-36, Y-38, Y-45 and Y-99 to include pH, acidity, alkalinity for a minimum period of two years.

2) **R645-301.742.220,** Provide a management plan for the alluvial groundwater for the Division's review. The Division will coordinate with the Utah Department of Water Quality – UPDES Section on reviewing this action.

Sincerely,

Daron R. Haddock
Coal Program Manager

DRH/PWB/ss
Enclosures
cc: Price Field Office
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1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114 -5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*


UTAH DNR OIL, GAS & MINING

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

September 13, 2011

TO: Internal File

THRU: Priscilla Burton, Team Lead PBurton SQS

FROM: April A. Abate, Environmental Scientist III aaa 9/13/2011

RE: Coal Hollow Drainage Control Adjustments, Alton Coal Development, Coal Hollow Mine Permit C/025/0005, Task ID #3895

**SUMMARY:**

The Division has been conducting an ongoing assessment of the drainage control issues that have arisen at the Coal Hollow Mine since active operations have commenced in November 2010. On August 26, 2011, Alton Coal Development, LLC (ACD) submitted a response to a deficiency letter issued by the Division on July 27, 2011. This memo addresses the adequacy of their response to the deficiencies identified.

The operator has indicated in this latest submittal that the reconfiguration of DD-2 so that the upper segment collecting undisturbed drainage flows to Lower Robinson Creek. Topsoil is scheduled to be removed from the segment of DD-2A that begins on the south side of the topsoil haul road. Sediment control structures should be placed within any headcuts of this channel as discussed with the operator. The Division would like this work to begin immediately.

The Permittee has decided to withdraw their plan to install a seep collection system at the outfall of the temporary diversion of Lower Robinson Creek. Recent changes to the mine sequence plan now have the operations focused in Pit #3. This pit area is located in the same area as the former Lower Robinson Creek natural channel and seepage area. The Permittee has indicated that with the overburden removal of Pit #3 currently in progress the source of the seepage has diminished and has eliminated the need for the collection system. Upon reclamation of Pit #3, the restoration of the original Lower Robinson Creek channel will be anticipated.

One deficiency remains but should be addressed under a separate submittal amending the water monitoring plan and preferably with the amendment that will address a management plan for the alluvial groundwater:

**[R645-724.500, 728.320]**: The Permittee responded to the Division's request to add acid, pH, and alkalinity sampling of wells screened in the coal seam with a letter report from Peterson Hydrologic, LLC. Analytical data from groundwater wells Y-36, Y-38, Y-45 and Y-99 (A2)

were collected in the 1980s as part of a previous permitting attempt conducted by Utah International and included in the Peterson Hydrologic LLC report (Appendix 7-13). The report concluded that the groundwater from the Smirl coal seam was consistently neutral to alkaline in character, with pH values ranging from 7.2 - 9.3. These pH values are relatively consistent with overall pH data that has been collected at the site (ranging from 6.55 – 9.19). However, the data provided did not analyze the groundwater samples for acidity. As a result, no comparison of the alkalinity to acidity could be made based on the data provided. The deficiency still stands: please update the water monitoring plan to include additional testing of pH, acidity, alkalinity in all groundwater monitoring wells screened in the coal seam for a period of two years. At the end of two year testing period, the data collected will be reevaluated to determine if any further actions are necessary.

## TECHNICAL ANALYSIS:

# SUPPORT FACILITIES AND UTILITY INSTALLATIONS

Regulatory Reference: 30 CFR Sec. 784.30, 817.180, 817.181; R645-301-526.

**Analysis:**

The Permittee has submitted a new Drawing 5-3A that details numbered culverts shown near the surface facilities area. The Division requested the maps be revised because it was difficult to discern the exact locations of where the individually numbered culverts are located due to the scale of the map.

**Findings:**

**[R645-301-512.100]:** The Permittee has submitted a new Drawing 5-3A that details numbered culverts shown near the surface facilities area. Deficiency resolved – no further action required.

# 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.

**Diversions: Miscellaneous Flows**

**[R645-301.732.300]:** Drawing 5-3 has been resubmitted and updated to reflect the diversion outfall point where DD-2B is directed to Lower Robinson Creek. Segment DD-2B will now direct undisturbed drainage originating in the northeast section of the permit area into LRC. This improvement/correction to this drainage ditch should significantly reduce the amount of runoff generated from undisturbed areas from being directed into Sediment Pond #2. DD-2A continues south of the top soil haul road along a natural ephemeral channel. The operator has indicated that topsoil removal from this segment of DD-2A will begin shortly. The Division would like this work to begin immediately.

**Siltation Structures: Sedimentation Ponds**

**[R645-301.742.220]:** The last round of deficiencies asked for the Permittee to provide a narrative description of the proposed seep collection system for Lower Robinson Creek at the outfall of the temporary diversion channel for inclusion in the MRP.

**Findings**: The Permittee has withdrawn this portion of the amendment addressing the perforated pipe collection system to address groundwater seepage from the natural channel of Lower Robinson Creek. The reason for this change is due to current mining operations focusing on coal extraction in Pit #3. This pit area is located in the same area as the former Lower Robinson Creek natural channel and seepage area. The Permittee has indicated that with the overburden removal of Pit #3 currently in progress the source of the seepage has diminished and has eliminated the need for the collection system. Groundwater is to be managed by a preferred upgradient dewatering trench. The Division is awaiting a separate submittal from the Permittee detailing the management of alluvial groundwater. The plan is currently under review with the Utah Department of Water Quality – UPDES Section and will be submitted to DOGM once approval is received from UDEQ.

**[R645-301.733.100]**: The Permittee has conducted a search for language references in the MRP that relates to the impoundments being designed for total containment. All language in the referenced text is acceptable and does not require any additional modifications.

**Acid- and Toxic-Forming Materials**

**Analysis:**

Based on the laboratory analytical data presented in Appendix 6-2, samples collected from initial coal samples during exploration activities indicated that acid potential did exceed neutralization potential in samples CH-03-05, CH-01-05 and composite sample CH-08. The existing monitoring wells in the network that are screened in the coal seam include: Y-36, Y-38, Y-45 Y-49 and Y-99 (A2). The operational water monitoring protocol for these wells is currently water level only on a quarterly basis. In order to better understand the acid/neutralization behavior of the groundwater in the coal seam and any overall negative effects to the hydrologic balance, the Permittee was asked to monitor wells these wells screened in the coal seam for acid-base groundwater laboratory analytical parameters quarterly (e.g. pH, acidity, alkalinity) for a minimum period of two years. At that time the data collected can be reevaluated to determine if any further actions are necessary.

**Findings**:

The Permittee responded to the Division's request to add acid, pH, and alkalinity sampling of wells screened in the coal seam with a letter report from Peterson Hydrologic, LLC. Analytical data from groundwater wells Y-36, Y-38, Y-45 and Y-99 (A2) were collected in the 1980s as part of a previous permitting attempt conducted by Utah International and included in the Peterson Hydrologic LLC report (Appendix 7-13). The report concluded that the groundwater from the Smirl coal seam was consistently neutral to alkaline in character, with pH values ranging from 7.2 - 9.3. These pH values are relatively consistent with overall pH data that has been collected at the site (ranging from 6.55 – 9.19). However, the initial data provided did not analyze the groundwater samples for acidity. As a result, no comparison of the alkalinity to acidity could be made based on the data provided. The deficiency still stands: please update the water monitoring plan to include additional testing of pH, acidity, alkalinity in all groundwater monitoring wells screened in the coal seam for a period of two years. At the end of two year testing period, the data collected will be reevaluated to determine if any further actions are necessary.

## RECOMMENDATIONS:

The drainage control amendment is considered approved. However, additional updates to the groundwater monitoring plan and the submittal of alluvial groundwater management plan should be addressed under a separate task for review.

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