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OK

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

June 26, 2012

TO: Internal File

THRU: Daron Haddock, Team Lead 

FROM: Ken Hoffman, Hydrologist 

RE: Drainage Control Adjustments, Alton Coal Development, Coal Hollow Mine, C/025/005, Task # 4101

SUMMARY:

On May 21 2012, The Utah Division of Oil Gas & Mining (Division) received and application for an amendment to the Mining and Reclamation Plan (MRP) of the Coal Hollow Mine. The primary purpose of the address deficiencies identified in a previous application for the inclusion of a plan for the management of alluvial groundwater that has been encountered during surface coal mining activities.

This memo addresses the application's compliance with the hydrology (R645-301-500) (R645-301-700) sections of the Utah Coal Mining Rules.

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TECHNICAL ANALYSIS:

OPERATION PLAN

The following deficiencies were identified during the initial review process:

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:

The application states that the alluvial groundwater interceptor drains will be appropriately sized to adequately pass the encountered quantities of intercepted alluvial groundwater and that the specific design of individual alluvial intercept trenches will likely be variable from location to location based largely on the nature of the alluvial materials encountered.

Findings:

Contents and information provided are not sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies were identified:

- **R645-301-526.115.2.** The applicant shall include a proceed for notification to the Division of the timeframe that they will be doing construction so the Division has the opportunity to observe the construction and installation.
- **R645-301-526.220.** The applicant shall require prior specific Division approval for any groundwater dewatering wells installed outside of the area to be mined. The application shall be revised to indicate wells will only be installed in areas yet to be mined. Request for installation of well outside of the area to be mined shall be submitted to the Division as an separate application for approval.
- **R645-301.724.100.** *The applicant must provide ground water quantity descriptions with details of approximate rates of discharge and flow within the alluvium. These estimates should be based on a worst-case precipitation event using the thickest section of alluvium that can be treated by a trench conveyance system and based on a 100-year, 24-hour precipitation event.*

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The applicant states "Chapter 7 text on page 7-16" addresses this deficiency. The text describes an observation of flow in the pits made on June 2, 2011 and that Table 7-9 includes flow rates in the alluvium. The applicant shall use the information since the start up of the mine of the flow into the pits and the information presented in MRP Table 7-9 to calculate a worst-case design flow rate in gallons per minute. The applicant shall use this design flow rate and document the calculations for the increase in size of Pond 3.

- **R645-301-731** The applicant shall demonstrate all required State Appropriated Water Rights are being address for groundwater dewatering and for any beneficial uses such as dust control for water collected from the groundwater dewatering wells.
- **R645-301-731-221.** In addition, to #16 on page 6 of the application, the applicant shall revise the monitoring discussion in the MRP and associated tables to specify the locations and frequencies where selenium monitoring will be performed in accordance with Permit condition No. 4.
- **R645-301-731.720. and R645-301-526.220** The applicant shall include a map showing the area where groundwater dewatering wells are being requested to be installed. It is the Divisions expectation this will be the perimeter of the area to be mined. The applicant shall provide an updated copy of this map within 15 days of the construction of any groundwater dewatering wells. The map shall include a legend with details on constructions specifications in relation to the standard design.
- **R645-301-731-730.** Revise MRP Drawing 7-10 (Water Monitoring Locations) to show spring monitoring location SP-19
- **R645-301-751.** The applicant must demonstrate that the effluent limitations for UPDES permit compliance prior to discharge. If the applicant is going to discharge at Outfall No. 005 the applicant shall at minimum collect and analyze a sample for UPDES effluent limitation parameters and receive these results prior to discharging. These result shall also be provided to the Division prior to discharging, however no Division approval for discharge will be required. As required by the UPDES permit testing will be required upon discharge at Outfall No. 005.

RECOMMENDATIONS:

Deficiencies must be adequately addressed before approval. Application should be denied and returned deficient.