

#4323

R

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

---

April 18, 2013

TO: Internal File

THRU: Priscilla Burton, Team Lead *PWB by SCS*  
Steve Christensen, Permit Supervisor *SCC*

FROM: Ken Hoffman, Hydrologist *KH*

RE: Change in Mining Sequence, Coal Hollow Mine, Alton Coal Development, LLC, C/025/0005, Task ID #4323

**SUMMARY:**

This amendment responds to deficiencies identified in the first review of Task 4254. The information provided meets the requirements of the Utah Coal Rules and is recommended for approval and incorporation into the MRP.

The April 3, 2013 revision extends the expected mine life to 2017 (Year 6) and describes two concurrently active pit areas in the NE1/4 and SE 1/4 of Section 30, beginning in Year 3 (2013) as shown on Dwg. 5-10. The change in mining sequence rearranges the progress of mining and reclamation. The application describes a preferred reclamation scenario wherein reclamation of Pits 16-22 is delayed until overburden from the adjacent BLM Lease By Application area is available. The mined out Pits 16-22 will be 32 acres in size, requiring 3,300,000 loose cubic yards to reclaim the 1,500 ft. x 875 ft area. The "Alternative," bonded scenario is to re-handle the Excess Spoil pile to backfill Pits 16 - 22.

This memo addresses the application's compliance with the hydrology (R645-301-700) section of the Utah Coal Mining Rules. Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The application is recommended for approval.

TECHNICAL MEMO

---

**TECHNICAL ANALYSIS:**

**ENVIRONMENTAL RESOURCE INFORMATION**

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

**CLIMATOLOGICAL RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 779.18, 783.18; R645-301-724.

**Analysis:**

The MRP addresses climatic information and the change in mining and reclamation does not affect this information.

**HYDROLOGIC RESOURCE INFORMATION**

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

**Analysis:**

**Sampling and Analysis**

The MRP addresses sampling and analysis and the change in mining and reclamation does not affect this information.

**Baseline Information**

The MRP addresses baseline information and the change in mining and reclamation does not affect this information.

**Baseline Cumulative Impact Area Information**

The MRP addresses baseline cumulative impact area and the change in mining and reclamation does not affect this information.

**Probable Hydrologic Consequences (PHC)**

In numerous sections<sup>1</sup> of the MRP in Chapter 7 it is discussed that "individual mine pits will typically remain open for less than about 60 to 120 days (measured from the time the mining

---

<sup>1</sup> Sections 724.500, 728.310, 728.333, and 728.334, and Appendix 7-1 *Investigation of Groundwater and Surface-Water Systems in the 630-Acre Proposed Coal Hollow Mine permit*

of the pit is completed to the time the pit is backfilled).<sup>2</sup> This language is used as a groundwater protection method to minimize groundwater discharge into pits. Pits 17-21 are on the edge of the alluvial groundwater discharge area A and the MRP specifically discusses alluvial groundwater discharge area A. Part of the protection for Area A is that the pits will not be open longer than 120 days. During a meeting on March 27, 2013 the Permittee assured the Division they understood this amendment does not grant additional time to R645-301-553.

### **Groundwater Monitoring Plan**

The MRP includes an extensive groundwater monitoring network. The proposed amendment should not require additional groundwater monitoring.

### **Surface-Water Monitoring Plan**

The MRP addresses surface-water monitoring plan and the change in mining and reclamation does not affect this information.

### **Findings:**

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

## **MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

### **Analysis:**

#### **Monitoring and Sampling Location Maps**

The MRP addresses monitoring and sampling location maps and the change in mining and reclamation does not affect this information.

#### **Subsurface Water Resource Maps**

Map 2.3.5.2-1 has been updated to include the subsurface water resources in the proposed expansion.

---

*And Adjacent Area; Probable Hydrologic Consequences of Coal Mining; Recommended Monitoring Plan; Potential Alluvial Valley Floor Information; Kane County, Utah*

<sup>2</sup> MRP Chapter 7, Section 728.334, Page 7-47

---

TECHNICAL MEMO

---

### **Surface Water Resource Maps**

Map 2.3.5.1-1 has been updated to include the surface water resources in the proposed expansion.

## **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, -300-148, -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:**

##### **Groundwater Monitoring**

The MRP includes an extensive groundwater monitoring network. The proposed amendment should not require additional groundwater monitoring.

##### **Surface Water Monitoring**

The MRP addresses surface water monitoring and the change in mining and reclamation does not affect this information.

##### **Acid- and Toxic-Forming Materials and Underground Development Waste**

The MRP addresses acid and toxic forming materials and the change in mining and reclamation does not affect this information. There no underground development included as part of this amendment.

##### **Transfer of Wells**

There are no wells being transferred as part of this amendment.

##### **Discharges Into An Underground Mine**

There are no underground mines in the area

##### **Gravity Discharges From Underground Mines**

There are no underground mines in the area

#### **Water-Quality Standards And Effluent Limitations**

The MRP addresses compliance with water quality standards and effluent limitations and the change in mining and reclamation does not affect this information.

#### **Diversions: General**

The MRP addresses compliance with diversion requirements and the change in mining and reclamation does not affect this information.

#### **Stream Buffer Zones**

The MRP addresses compliance with stream buffer zones and the change in mining and reclamation does not affect this information.

#### **Sediment Control Measures**

The MRP addresses compliance with sediment control measures and the change in mining and reclamation does not affect this information.

#### **Siltation Structures**

The MRP addresses compliance with siltation structures and the change in mining and reclamation does not affect this information.

#### **Discharge Structures**

The MRP addresses compliance with discharge structures and the change in mining and reclamation does not affect this information.

#### **Impoundments**

No impoundments are included as part of the amendment.

#### **Ponds, Impoundments, Banks, Dams, and Embankments**

No impoundments, banks, dams, or embankments are included as part of the amendment.

---

TECHNICAL MEMO

---

**Findings:**

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah 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:**

**Monitoring and Sampling Location Maps**

No change to the monitoring locations is proposed in the amendment.

**CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT  
(CHIA)**

Regulatory Reference: 30 CFR Sec. 784.14; R645-301-730.

**Analysis:**

The Draining of Up-Gradient Groundwater Resources section of the CHIA states that “temporary reductions in flow from alluvial aquifers may occur but are likely to be short-lived as the pits will remain open for only 60 to 120 days”. If the intent of the operator is to update Chapter 7 to have pits open longer than 120 days then the CHIA will need to be updated accordingly. However, the Permittee has stated that pits will not be open longer than 60 to 120 days so no change is required to the CHIA.

**RECOMMENDATIONS:**

The application is recommended for approval.