

#4254
R

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

March 14, 2013

TO: Internal File

THRU: Priscilla Burton, Environmental Scientist III, Soils / Team Lead *PBlm 825*
Steve Christensen, Env Sci III, Hydrology, Task Manager / Permit Supervisor

FROM: Ken Hoffman, Hydrologist

RE: Change in Mining Sequence, Coal Hollow Mine, Alton Coal Development, LLC, C/025/0005, Task ID #4254

SUMMARY:

The February 12, 2013 revision extends the expected mine life to 2017 (Year 6) and describes two concurrently active pit areas in the NE1/4 and SE ¼ 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 16-21 is delayed until overburden from the adjacent BLM Lease By Application area is available. The mined out Pits 16-21 will be 50 acres in size, requiring 6,300,000 loose cubic yards to reclaim the 1,500 ft. x 1,300 ft area. The "Alternative," bonded scenario is to re-handle the Excess Spoil pile to backfill Pits 16 - 21.

This memo addresses the application's compliance with the hydrology (R645-301-700) section of the Utah Coal Mining Rules. The application does not address any hydrologic issues as relevant to this change in mining plan. The application includes numerous deficiencies due to not addressing hydrology. The application is not recommended for approval until the following issues are resolved:

R645.301.724.500 & R645.301.728.310 In order for the amendment to concur with existing MRP Chapter 7 language, studies, and appendixes the amendment must state that no pits will be open longer than 120 days. If the operator intends to maintain Pits 17-21 open for longer than 120 days the amendment must include updated language at minimum for Sections 724.500, 728.310, 728.333, and 728.334, and Appendix 7-1.

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 sections¹ 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

¹ 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).”² This language is used as a groundwater protection method to minimize groundwater discharge into pits. The amendment implies an indefinitely time frame for Pits 17-21 to be open. 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. In order for the amendment to in concur with the existing language, studies, and appendixes of Chapter 7 the amendment must state that no pits will be open longer than 120 days.

If the operator intends to maintain Pits 17-21 open for longer than 120 days the amendment must include updated language at minimum for 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 And Adjacent Area; Probable Hydrologic Consequences of Coal Mining; Recommended Monitoring Plan; Potential Alluvial Valley Floor Information; Kane County, Utah.*

Groundwater Monitoring Plan

The MRP includes an extensive groundwater monitoring network. The proposed amendment should not require additional groundwater monitoring. However, if Chapter 7 is reevaluated changes may be required.

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 not sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies must be addressed prior to the Division approval of the application:

R645.301.724.500 & R645.301.728.310 In order for the amendment to concur with existing MRP Chapter 7 language, studies, and appendixes the amendment must state that no pits will be open longer than 120 days. If the operator intends to maintain Pits 17-21 open for longer than 120 days the amendment must include updated language at minimum for Sections 724.500, 728.310, 728.333, and 728.334, and Appendix 7-1.

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

² MRP Chapter 7, Section 728.334, Page 7-47

TECHNICAL MEMO

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.

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, -300-147, -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. However, if Chapter 7 is reevaluated changes may be required.

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 is underground development anticipated 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.

TECHNICAL MEMO

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.

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.

RECOMMENDATIONS:

The application is not recommended for approval until the deficiencies are addressed.

O:\025005.COL\WG4254\kmh4254.docx