



Technical Analysis and Findings

Utah Coal Regulatory Program

September 28, 2016

PID: C0070013
TaskID: 5256
Mine Name: HORSE CANYON MINE
Title: IBC FOR NEW VENTILATION BREAKOUT

Environmental Resource Information

Permit Area

Analysis:

The amendment meets the State of Utah R645 requirements for the Permit Area.

The amendment meets the minimum requirements of R645-301-521.140 due to information stated in the mine plan details and plates which match the provided legal description of the mine boundary. The Incidental Boundary Change (IBC) would allow for the development of a new ventilation breakout to the coal outcrop for the life of the Lila Canyon Mine just north of the Central Graben Fault. The IBC will add forty acres to the permit area, which is less than 1% of the currently approved permit area of 5,992 acres. The new total permit area would be 6,032 acres.

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Maps Affected Area Boundary Maps

Analysis:

The amendment meets the State of Utah R645 requirements for Affected Area Boundary Maps.

The amendment meets the minimum requirements of R645-301-521.100 through-521.130 by updating all the relevant maps for the entire area shown on the mine plan as detailed on Plates 1-1, 2-1, 3-1A through 3-1D, 3-2, 4-1 through 4-4, 5-1, 5-2a, 5-3, 5-4, 5-5, 6-1 through 6-5, 7-1, 7-1A, 7-3, and 7-4.

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Maps Existing Surface Configuration

Analysis:

The amendment meets the State of Utah R645 requirements for Existing Surface Configuration Maps.

The amendment meets the minimum requirements of R645-301-521.150 as it includes a drawing or plate that clearly calls out the existing surface on Plate 1-1. The ventilation breakout is not projected to occur under the nearby ephemeral drainage channels and will not disturb the nearby Big and Little Stinky Springs.

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Maps Mine Working

Analysis:

The amendment meets the State of Utah R645 requirements for Mine Workings Maps.

The amendment meets the minimum requirement of R645-301-521.140 which require maps that clearly show all mine plans. Plate 5-2a depicts the projected location of the breakout to the coal outcrop as the actual location of the breakout may vary from the drawing due to geologic conditions that may be encountered during the underground mine operations. The breakout is intended to be located as near as practical to the Central Graben Fault. Plate 5-5 is unclear to similar colored projected mining panels.

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Maps Permit Area Boundary

Analysis:

The amendment meets the State of Utah R645 requirements for the Permit area and Boundary maps.

The amendment meets the minimum requirements of R645-301-521.140 as Plates were updated within the amendment to detail the new permit boundary, lease boundary, and adjacent areas to the current mine plan. Plates 1-1, 2-1, 3-1A through 3-1D, 3-2, 4-1 through 4-4, 5-1, 5-2a, 5-3, 5-4, 5-5, 6-1 through 6-5, 7-1, 7-1A, 7-3, and 7-4 were updated within the amendment to reflect the additional forty acres to the Permit Area.

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Maps Surface and Subsurface Manmade Features

Analysis:

The amendment meets the State of Utah R645 requirements for preexisting Surface and Subsurface Manmade features maps.

The amendment meets the minimum requirement of R645-301-521.122 as it includes a drawing or plate that clearly calls out the existing surface and subsurface man made features within, passing through, or passing over the permit area. R645-301-521.120 through-521.125 requires maps to clearly show there are no existing surface and subsurface facilities at the project point of the breakout.

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Maps Surface and Subsurface Ownershiip

Analysis:

The amendment meets the State of Utah R645 requirements for Surface and Subsurface Ownership Maps.

The amendment meets the minimum requirements of R645-301-521.130 which requires landowners, right of entry, and public interest maps. All of the surface and coal resources within this IBC are owned by the Bureau of Land Management (BLM), and are currently lease to Utah American Energy, Inc under Federal Lease #SL-066490 in an area recently approved R2P2 to allow development of the new ventilation breakout.

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Operation Plan

Mining Operations and Facilities

Analysis:

The amendment meets all the State of Utah R645 requirements for Mining Operations and Facilities.

The amendment meets the minimum requirements of R645-301-521 by adding detailed ventilation breakout information in Appendix 5-9. The appendix contains all the typical portal sections, reclaimed slope stability analysis required for the Graben breakout to meet R645-301-523, -526, and 528 by including a description of the mining operation, method of coal mining, engineering techniques, anticipated annual and total production of coal by tonnage, and major equipment to be used for all aspects of those operations proposed to be conducted during the life. Longwall mining is not currently planned to be associated with this IBC, the development of the new ventilation breakout is critical to future longwall mining projected in the general area of the mine.

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Coal Recovery

Analysis:

The amendment meets the State of Utah R645 requirements for Coal Recovery.

The amendment meets the minimum requirements of R645-301-522 due to a discussion of the measures to be used to maximize the use and conservation of the coal resources. As detailed previously, all of the surface and coal resources within this IBC are owned by the Bureau of Land Management (BLM), and are currently lease to Utah American Energy, Inc under Federal Lease #SL-066490 in an area recently approved R2P2 to allow development of the new ventilation breakout. Longwall mining is not currently planned to be associated with this IBC, the development of the new ventilation breakout is critical to future longwall mining projected in the general area of the mine. The graben breakout itself will consist of two openings at the surface, accessed and installed completely from underground. A metal canopy will be constructed at each of the two openings, measuring approximately eighteen feet wide by approximately eight feet high and extending approximately fifteen feet out from the intersection of the top of the coal seam and the talus slope above the coal seam. The entire disturbance will be approximately 800 square feet total for both portals.

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Subsidence Control Plan Renewable Resource

Analysis:

The amendment meets the State of Utah R645-301-525.130 requirements for Subsidence Control Plan with a renewable resources survey.

The minimum requirements of R645-301-525.130 are met in the amendment as the Permittee presented a clear subsidence plan for protected areas. Development mining for the new ventilation breakout will be performed in less than 700 feet of cover. Longwall mining is not currently planned to be associated with this IBC, the development of the new ventilation breakout is critical to future longwall mining projected in the general area of the mine. As detailed on Plate 5-3 no subsidence is projected for the IBC area at this time.

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Subsidence Control Plan Subsidence

Analysis:

The amendment meets the State of Utah R645-301-525.400 requirements for Subsidence Control Plan.

The minimum requirements of R645-301-525.400 are met in the amendment as the Permittee presented a clear subsidence plan for protected areas. Development mining for the new ventilation breakout will be performed in less than 700 feet of cover. Longwall mining is not currently planned to be associated with this IBC, the development of the new ventilation breakout is critical to future longwall mining projected in the general area of the mine. As detailed on Plate 5-3 no subsidence is projected for the IBC area at this time.

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Subsidence Control Plan Slides and Other Damage

Analysis:

The amendment meets the State of Utah R645 requirements for Slides and Other Damage.

The amendment meets the minimum requirements of R645-301-515.100 with procedures already described within the

existing MRP detailing the emergency contact procedures in the event of a slide. Development mining for the new ventilation breakout will be performed in less than 700 feet of cover. Longwall mining is not currently planned to be associated with this IBC, the development of the new ventilation breakout is critical to future longwall mining projected in the general area of the mine. As detailed on Plate 5-3 no subsidence is projected for the IBC area at this time. Plate 5-2A shows a slope profile view of the expect breakout profile detailing a slope at an approximate elevation of 6280 ft. The breakout pad will be constructed from the inside of the mine workings. Two ASCA will be installed to control sediment runoff from leaving the permit area untreated. A slope stability analysis was conducted on the breakouts and contained within Appendix 5-9.

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Fish and Wildlife Protection and Enhancement Plan

Analysis:

The information is not adequate to meet this section of the regulations. Prior to approval the following information is required in accordance with R 645-301-333; It is recommended that Volume 2, chapter three, Section 333.300 #7 has been revised to include to a commitment to avoid disturbance associated with the portal breakout during the Bighorn rut and lambing seasons, November 15th to December 15th and May 1st to June 15th. However a commitment should also be made to contact the Division and DWR if water is discharged in appreciable amounts that could be provided for wildlife. [JCH]

Deficiencies Details:

The information is not adequate to meet this section of the regulations. Prior to approval the following information is required in accordance with R 645-301-333; It is recommended that Volume 2, chapter three, Section 333.300 #7 has been revised to include to a commitment to avoid disturbance associated with the portal breakout during the Bighorn rut and lambing seasons, November 15th to December 15th and May 1st to June 15th. However a commitment should also be made to contact the Division and DWR if water is encountered in appreciable amounts that could be provided for wildlife. [JCH]

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Support Facilites and Utility Installations

Analysis:

The amendment meets the State of Utah R645 requirements for Support Facilities and Utility Installations.

The amendment meets the minimum requirements of R645-301-521.180 and -526 the require the description, plans, and drawing for each support facility to be constructed, used, or maintained within the proposed permit area. The new ventilation breakout will have a small surface disturbance, similar the existing South Breakout, as all work will be performed through the underground mine workings. No surface roads or power lines will be required for the breakout.

The amendment included changes to the Chapter 5, Section 521.121 and 521.124 clarifying there are no buildings or existing areas of spoil, or waste within 1000 feet of the permit area that are not already approved structures associated with the Lila Canyon Mine.

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Maps Affected Area

Analysis:

The amendment meets the State of Utah R645-301-521.100 requirements for Affected Area Maps.

The amendment meets the minimum requirements of R645-301-521.100 through-521.130 by updating all the relevant maps for the entire area shown on the mine plan as detailed on Plates 1-1, 2-1, 3-1A through 3-1D, 3-2, 4-1 through 4-4, 5-1, 5-2a, 5-3, 5-4, 5-5, 6-1 through 6-5, 7-1, 7-1A, 7-3, and 7-4.

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Maps Certification Requirements

Analysis:

The amendment meets the State of Utah R645-301-512 Certification Requirements.

R645-301-512 minimum requirements are met as all mine drawings and plates are stamped by David Hibbs, a Utah certified professional engineer with experience in underground mining operations.

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Reclamation Plan

General Requirements

Analysis:

The amendment meets the State of Utah R645 requirements for Reclamation Activities.

The minimum requirements of R645-301-540 are met within the amendment as Appendix 5-9 contains reclamation details associated with the Graben breakout.

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Approximate Original Contour Restoration

Analysis:

The amendment meets the State of Utah R645 requirements for Approximate Original Contour Restoration.

The amendment meets the minimum R645-301-512.200, -553.110 through -553.150, and -302-270 due to narrative with the MRP Appendix 5-9 detailing how the proposed breakout pad will be reclaimed. The Permittee clarified in Chapter 3 of appendix 5-9 how the blockwall and backfill will be graded at final reclamation of the site.

AOC as defined by R645-301-553.100 through -553.150 is achieved when the final grade closely resembles the general surface configuration of the land prior to mining activities and provides a subsurface foundation for vegetative cover capable of stabilizing the surface from erosion.

The amendment meets the minimum R645-301-512.200 and -553.110 as the amendment includes narrative how the approximate original contours detailed on Figure 3 of appendix 5-9 will be reclaimed to a stable slope.

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Backfill and Grading General

Analysis:

The amendment meets the State of Utah R645 requirements for Backfill and Grading.

The amendment meets the general requirements of R645-301-553 by updating the reclamation plan detailing a general backfill. The grading plan details how disturbed areas will be backfilled and graded to achieve the approximate original contour, eliminate all highwalls, spoil piles, and depressions, and achieve a postmining slope that does not exceed either the angle of repose or such lesser slope as is necessary to achieve a minimum long term static safety factor of 1.3 and to prevent slides, minimize erosion and water pollution both on and off the site, and support the approved postmining land use. To minimize the disturbance area and increase the chances of reclamation the breakout pad will be reached from within the mine workings. This limits the size of the breakout area to reasonable small and minimal backfilling will be required at reclamation of the area. Figure 3 show reclamation slope at final abandonment of the site.

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Mine Openings

Analysis:

The amendment meets the State of Utah R645 requirements for Mine Openings.

The minimum requirements of R645-301-513.500, R645-301-529, R645-301-542.700, and R645-301-551 are met within the amendment to updated narrative in Chapter 3 of Appendix 5-9 within the MRP sealing of mine openings at the time of final reclamation. The breakout will be reclaimed in a similar fashion to the South breakout. Appendix 5-6 and 5-8 detail the typical sealing of mine openings and Figure 2 in Appendix 5-9 show the Graben breakout reclamation profile.

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Maps Bonded Area

Analysis:

The amendment meets the State of Utah R645 requirements for Bonded Area.

The minimum requirements of R645-301-800 are met within the amendment as the bonded area map was updated on Plate 1-1 and Plate 5-2a. Other plates updated include Plate 5-1, 5-3, 5-4 and 5-5 to include the additional 40 acres associated with the Graben breakouts.

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Bonding Determination of Amount

Analysis:

The Horse Canyon, IBC for Ventilation Breakout, Task ID #5256 does not meet the requirements of R645-830 and is deficient. We received bids for parts of the reclamation, including helicopter equipment removal and vegetation bids, but we didn't receive the red line updated bonding sheets illustrating all costs needed to reclaim the IBC Ventilation Breakouts.

Deficiencies Details:

R645-301-830: The Permittee shall provide updated detailed line item bonding costs sheets for Demolition, Revegetation, and Earth Work showing red lined additions for the reclamation that will need to be done on the Breakout surface disturbances associated with the breakout pad. The detailed estimates should be in 2013 dollars, include supporting calculations for the estimates. Please include any grading of the berms/portals and seal construction associated with the breakouts.

The Division cannot assume that inside mine workings will be available to seal the breakouts so one of the helicopter bids will need to be used. We will use the lower bid, Mountain West Helicopters, at \$20,000, for the removal of equipment.

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