



Technical Analysis and Findings
Utah Coal Regulatory Program

April 11, 2016

PID: C0070013
TaskID: 5081
Mine Name: HORSE CANYON MINE
Title: IBC FOR NEW VENTILATION BREAKOUT

Summary

The Permittee submitted an amendment to the MRP to include an incidental boundary change of 40 acres in the south west portion of the permit area. This amendment also includes two proposed ventilation breakouts.

Deficiencies Details:

[Empty box for deficiency details]

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General Contents

Right of Entry

Analysis:

The amendment does not meet the State of Utah R645 requirements for General: Right of Entry.

Chapter 1 was not updated to include right of entry information or updated legal descriptions.

Deficiencies Details:

The amendment does not meet the State of Utah R645 requirements for General: Right of Entry. The following deficiencies must be addressed prior to final approval:

R645-301-114 A description of the documents upon which the Permittee bases their legal right to mine coal and create new surface disturbances within the proposed additional 40 acres must be provided. The legal description of these areas must also be updated in Chapter 1 of the MRP.

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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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Soils Resource Information

Analysis:

Analysis:

The information meets the requirements of R645-301-220, Environmental Description and Soil Survey. Plate 1-1 shows the 40 acre area to be included by the Incidental Boundary Change for federal lease SL-066490. The location is adjacent to the existing Lila Lease boundary in T 16 South R 14 E, Sec 26, on the Book Cliffs, just west of Little Park Wash. Plate 5-2A shows the location of the breakout in the SESE of Sec 16 along the coal outcrop at an elevation between 6,200 and 6,300 ft. in a talus slope. The Order III NRCS soil survey of Emery County (Plate 2-1) shows soils at the elevation of the breakout are Gerst-Strych-Badland Complex, 30 -70% slopes, Map Unit NGG2.

Findings:

The Incidental Boundary Change associated with the North Breakout fits into the category of adverse conditions, R645-301-232.700, where no topsoil is required to be recovered.

pburton

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 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 does not meet all the State of Utah R645 requirements for Mining Operations and Facilities.

The amendment does not meet the minimum requirements of R645-301-521 by removing text within the MRP that pertains to the two parts of the permit. The Permit was issued under the original Horse Canyon mine, detailed as Part A of the MRP. Since the original issuance of the Permittee the Permittee has received Phase III bond release on the majority of the permit area pertaining to Part A. The only proposed mining activities within the current Permit pertain to Part B, Lila Canyon area of the mine. The Permittee cannot simply remove the Part A and Part B text within Chapter 5 Section 521.111 as it removes required historic information. Part B text may be removed in sections as the Part B references remain unchanged. However, removing Part A text and leaving the references results in incorrect information. The Permittee may add text saying historic Part A and separating the references but may not just delete the Part A text.

The amendment does not meet the minimum requirements of R645-301--521, 523, -526, and 528 by not including a detailed description of the mining operation design and layout for the breakout pad 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.

Deficiencies Details:

R645-301-121.200, R645-301-521.100: The Permittee will either amend the text to state the historic cross references to Part A drawings or leave the Parts A and B within the MRP chapter 5 Section 521.111, 521.120, 521.212, 521.122, 521.124, 521.152, 526.110, 553.500

R645-301-521: The Permittee must update the MRP to provide clear narratives and engineered designs for the breakout pad.

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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.

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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.

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Fish and Wildlife Protection and Enhancement Plan

Analysis:

The Division has distributed the application to the biologists (DWR, BLM) in the resource area where the proposed breakouts will be located. This location near Stinky springs is actively utilized by the population of big horn sheep in that area. A site visit is being scheduled to determine the scope and level of information required to update the current wildlife protection and enhancement plan. If it is determined that the proposed area will be utilized by the sheep during a critical part of their life cycle UEI may need to avoid completing the breakouts for a certain period of time. No additional information is required at this time.

jhelfric

Fish and Wildlife Endangered and Threatened

Analysis:

The application should include a commitment to conduct the appropriate survey(s) to verify the presence or absence of listed or proposed endangered or threatened plant and animal species or their habitats as well as areas of high value habitat.

Deficiencies Details:

The information in the application is not adequate to meet the requirements of this section of the regulations. Prior to approval the following information is required in accordance with R645-301-322;

The application should include a commitment to conduct the appropriate survey(s) to verify the presence or absence of listed or proposed endangered or threatened plant and animal species or their habitats as well as areas of high value habitat.

jhelfric

Topsoil and Subsoil

Analysis:

Analysis:

The plan meets the requirements of R645-301-232.300, because the inset on Plate 5-2a presents a plan for construction of a soil berm that will be seeded.

pburton

Hydrologic General

Analysis:

The amendment does not meet the State of Utah R645 requirements for Hydrologic: General.

The Permittee has proposed to add 40 acres in an incidental boundary change to their permit area. They have also proposed two ventilation breakouts to be included in this amendment. A detailed hydrologic review of these proposed changes could not be completed due to the incomplete nature of this amendment.

There was no discussion in the MRP about the proposed changes, and only entire permit area overviews of the addition of the 40 acres in hydrology plates 7-1, 7-1A, 7-3 and 7-4. Because of the limited nature of what was submitted, no information was provided on the sediment controls that will take place on the portal breakout pads, the size of the portal disturbances, whether the disturbed areas will be qualified as ASCAs, whether there is potential for mine discharge from the portals and how the breakouts will be reclaimed. Also, the plates provided were of poor resolution, making review difficult.

This information must be provided to the Division so the amendment can be properly reviewed.

Deficiencies Details:

The amendment does not meet the State of Utah R645 requirements for Hydrologic: General. The following deficiencies must be addressed prior to final approval:

R645-301-730 The amendment must address the R645 hydrology rules associated with the proposed surface disturbance of the breakouts.

R645-301-700 The references to ""part A"" of the permit area must remain in the MRP, since this information is still necessary for historical reference.

R645-301-722 Maps must be clear and legible. The submitted plates are of poor resolution, making review difficult.

R645-301-722 Detailed maps of the proposed surface disturbance associated with the breakouts must be provided.

adaniels

Support Facilities 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 Mine Workings

Analysis:

The amendment does not meet the State of Utah R645 requirements for Mine Workings Maps.

The amendment does not meet 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. The plate is unclear is the break out will be planned in 2016, 2022, or 2024 due to a similar color representing all three years. The Permittee should amended the map with color of larger variance so it is clear what year the break out will be planned for.

Deficiencies Details:

R645-301-121.200, R645-301-521.140: The Permittee shall amend Plate 5-5 color scheme to be more clear (different color grid).

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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:

ANALYSIS:

The amendment does not meet the State of Utah R645 requirements for Reclamation Activities.

The minimum requirements of R645-301-540 are not met within the amendment as there is no change to the existing MRP reclamation details. There is no change to MRP Chapter 5 Section 542 or 553 to detail how the South breakout pad or this proposed IBC pad will be reclaimed at final reclamation of the site. The Permittee must include detail narrative and designs showing how any surface disturbance will be reclaimed.

Deficiencies Details:

R645-301-512.200, R645-301-542.700, R645-301-551: The Permittee will amend appropriate sections within Chapter 5 Sections 540 to details how the breakout pads will be reclaimed to the typical drawing shown in Appendix 5-6.

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Approximate Original Contour Restoration

Analysis:

The amendment does not meet the State of Utah R645 requirements for Approximate Original Contour Restoration.

The amendment does not meet the minimum R645-301-512.200 , -553.110 through -553.150, and -302-270 due to no narrative with the MRP detailing how the proposed breakout pad will be reclaimed. Appendix 5-6 details a typical reclamation of a portal with a solid concrete wall and 25 feet minimum backfill distance. The Permittee must clarify 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 does not meet the minimum R645-301-512.200 and -553.110 as there is no change in the MRP. There MRP is missing narrative how the approximate original contours detailed on Plate 5-2a will be reclaimed as detailed in Figure 4.6.2-1 in Appendix 5-6.

Deficiencies Details:

R645-301-512.200 , -553.110 through -553.150, R645-301-542.700 and R645-302-270: The Permittee will amend appropriate sections within Chapter 5 Sections 540 to details how the breakout pads will be reclaimed to the typical drawing shown in Appendix 5-6.

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Backfill and Grading General

Analysis:

The amendment does not meet the State of Utah R645 requirements for Backfill and Grading.

The amendment does not meet the general requirements of R645-301-553 by no change in the 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. The Permittee must clarify how the breakout will be reclaimed and sealed to achieve a minimum long term static safety factor of 1.3.

Deficiencies Details:

R645-301-512.200 , -553.110 through -553.150, R645-301-542.700 and R645-302-270: The Permittee will amend appropriate sections within Chapter 5 Sections 540 to details how the breakout pads will be reclaimed to the typical drawing shown in Appendix 5-6 to achieve a minimum long term static safety factor of 1.3.

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Mine Openings

Analysis:

The amendment does not meet 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 not met within the amendment as there is no change to the existing 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

Deficiencies Details:

R645-301-513.500, R645-301-529, R645-301-542.700, and R645-301-551: The Permittee will provide a typical sealing representative of the breakout seals and additional narrative detailing how backfill grading will be achieved.

cparker

Topsoil and Subsoil

Analysis:

Analysis:

The information provided is not adequate to meet the requirements of R645-301-233, since the source of the backfill (which will also be substitute topsoil) is not described for the portal highwall reclamation.

Chapter 5, Appendix 5-6 and Section 553.120 (p. 64) and Plate 5-9 describe the reclamation of the mine openings including the fan portals and breakouts. This section describes suitable material being placed against the portals and shaping of the slope back to original contour. The source and volumes of suitable fill required to reclaim the cut at the breakout were not described. Please provide a volume estimate and source for the suitable fill that will be required to reclaim the IBC breakouts and include a figure for the IBC breakouts similar to Plate 5-9 which shows pre-existing, operating and final reclamation contours for the breakout.

Deficiencies Details:

Deficiency:

R645-301-233, Please provide a volume estimate and source for the suitable fill that will be required to reclaim the IBC breakout highwall and include a figure for the IBC breakouts similar to Plate 5-9 which shows pre-existing, operating and final reclamation contours for the breakout.

pburton

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.

cparker

Bonding and Insurance General

Analysis:

The amendment meets the State of Utah R645 requirements for Bonding and Insurance Requirements.

The amendment meets the minimum requirements of R645-301-800 as the applicant is current on the bond and insurance standings.

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Bonding Form of Bond

Analysis:

The amendment does not meet the State of Utah R645 requirements for Form of Bond.

The amendment does not meet the minimum requirements of R645-301-860.100 as the applicant currently maintains a surety bond amount for a total of \$1,799,00 which is held by three different surety companies but did not include any bond increase for the additional surface disturbances and portal sealing. XL specialty insurance company maintains a bond of \$1,556,000, Rockwood insurance company maintains the two other bonds of \$130,000 and \$113,000. The last adjustment of bond was on 7/25/2012 where 0.49 acres were released for \$8,000.

Deficiencies Details:

R645-301-860.100: The Permittee shall provide updated bond costs and surety information.

cparker

Bonding Determination of Amount

Analysis:

The amendment does not meet the State of Utah R645 requirements for Determination of Bond Amount.

The amendment meets the minimum requirements of R645-301-830.140 as the Permittee did not submit detailed bond information in regards to the amendment of sealing the breakout portals.

Deficiencies Details:

R645-301-830.140: The Permittee shall submit detailed line item estimates of reclamation for the surface disturbances associated with the breakout pad. The estimate should be in 2013 Dollars and include any grading of the berms/portals and seal construction associated with the breakout.

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Bonding Terms and Conditions Liability Insurance

Analysis:

The amendment meets the State of Utah R645 requirements for Terms and Conditions for Liability Insurance.

The amendment meets the minimum requirements of R645-301-850 as the applicant currently holds liability insurance through Federal Insurance Company Co, effective until 6/1/16. The insurance includes the required Marsh from, explosives and claims made per occurrence.

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