



Technical Analysis and Findings

Utah Coal Regulatory Program

May 3, 2016

PID: C0150025
TaskID: 5109
Mine Name: BEAR CANYON MINE
Title: ACCESS ROAD

Operation Plan

Topsoil and Subsoil

Analysis:

Analysis: Rhino Castle Valley Mining LLC's will move 150 CY of topsoil in the Wild Horse Ridge Topsoil pile in order to construct an access road to facilitate maintenance of the conveyor and to remove coal fines from undisturbed slopes, as shown on Drawing 2-2B.. This meets the requirements of R645-301-234.240, because the narrative in Section 231.400 page 2-28 of the MRP states the topsoil will be relocated on the same stockpile (as shown on Dwg 2-2B) and the berm will be re-established. Both the new berm and disturbed soil will be reseeded with the approved mix. Chapter 2, page 2-28 also states a commitment to provide an "as-built" figure of drawing 2-2B that shows the new contours of the topsoil pile, and the berm adjacent to the road. This commitment will be added to the Annual Report list.

pburton

Road Systems Classification

Analysis:

The amendment does not meet the State of Utah R645 requirements for Road Systems and Other Transportation Facilities. The amendment does not meet the requirements of R645-301-527.100 by failing to detail and classify each road as primary or ancillary within Chapter 5. The #2 Belt access road is classified as an ancillary road within the R645 regulations and needs a detailed description of each road to be constructed, used, or maintained within the permit area. The amendment is missing a Chapter 5 narrative similar to the text provided to update Chapter 2 of the MRP.

Deficiencies Details:

R645-301-521.170, R645-301-527.200 through -527.230, R645-301-534, R645-301-553: The Permittee shall add a detailed description of the construction, use, and maintenance of #2 Belt Access road to Chapter 5.

cparker

Road System Plans and Drawings

Analysis:

The amendment does not meet the State of Utah R645 requirements for Transportation Plans and Drawings.

The amendment does not meet the requirements of R645-301-534.100 by failing to submit specifications for each road width, road gradient, road surface, road cut, fill embankment plans and drawings for each road to be maintained within the permit area. The Permittee will provide a drawing showing the design of the #2 Belt Access Road or a narrative detailing how the road will be constructed and maintained similar to the Lower Conveyor Access Road.

*Deficiencies Details:*

R645-301-521.170, R645-301-527.200 through -527.230, R645-301-534, R645-301-553: The Permittee shall add a detailed drawing showing the specifications for each road width, road gradient, road surface, road cut, fill embankment.

cparker

## Road System Plans and Drawings

*Analysis:*

The amendment does not meet the State of Utah R645 requirements for Road Drainage.

The amendment provides a map but it does not provide a narrative of how drainage from the road will be handled.

*Deficiencies Details:*

R645-301-742.400: The amendment does not meet the State of Utah R645 requirements for Road Drainage.

The application must provide a narrative for how runoff from watershed AD-16 will be captured and routed by the road to Catch Basin 1. The amendment must include a narrative on the stability of the borrow ditch berm and plans to reestablished D-15D if the Access Road is reclaimed.

kstorrar

## Road System Performance Standards

*Analysis:*

The amendment meets the State of Utah R645 requirements for Performance Standards of roads within the permit area.

The amendment meets the requirements of R645-301-534.150 by submitting general maintenance plans and drawing for each road to be maintained within the permit area to prevent and control erosion within Chapter 5. The #2 Belt Access road is connected with the Lower Conveyor Access Road and will be maintained in a similar fashion.

cparker

## Road System Other Transportation Facilities

*Analysis:*

The amendment meets the State of Utah R645 requirements for Other Transportation Facilities.

The amendment meets the requirements of R645-301-521.170 by submitting plans and drawing for each road, conveyor, and rail system to be used within the proposed permit area. This amendment is associated with the need for an access road for maintenance of the #2 belt conveyor.

cparker

## Hydrologic Diversion General

*Analysis:*

The amendment meets the State of Utah R645 requirements for Diversions.

Appendix 7G and 7K in Chapter 7 of the approved MRP provides a narrative and calculations for drainage control within the Access Road area. Watershed AD-16 drains from the Topsoil Stockpile down to D-15D and into Catch Basin 1. Runoff and peak flow from watershed AD-16 is calculated using a Hydrograph Generation Program. The peak flow value is then used to calculate velocity along D-15D and through the Spillway into Catch Basin 1. The runoff volume is used to properly size

Catch Basin 1. It is assumed these calculations will not change and the borrow ditch of the Access Road will function as D-15D for capturing and routing runoff from AD-16 to Catch Basin 1.

kstorrar

## Hydrologic Sediment Control Measures

### Analysis:

The amendment meets the State of Utah R645 requirements for Sediment Control Measures.

The approved MRP provides calculations of Catch Basin 1 Spillway and the D50 = 6 inch riprap that must be installed to stabilize the spillway.

kstorrar

## Maps Facilities

### Analysis:

The amendment meets the State of Utah R645 requirements Mining Facilities Maps.

The amendment meets the requirements of R645-301-521.120 through-521.125 which require maps to clearly show existing surface and subsurface facilities. The amended included updates to mine facilities Plate 5-6F. The #2 Belt is connected to the Lower Conveyor Access Road and will be utilized as an maintenance access road for the conveyor belt.

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## Reclamation Plan

### General Requirements

#### Analysis:

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

The requirements of R645-301-540 are met within the amendment as there is no change to the existing MRP reclamation details. The new #2 Belt Access road falls within previously disturbed boundary, shown on Plate 5-2F, and is already accounted for final grade reclamation shown on Plate 5-6F. The amendment does not meet R645-301-553 regulations as the amendment lacks grading volume details for the reclamation of the #2 Belt access road. This deficiency is discussed in Backfill and grading analysis.

#### Deficiencies Details:

R645-301-521.170, R645-301-527.200 through -527.230, R645-301-534, R645-301-553: The Permittee shall add the additional 150 CY of topsoil removal and additional cut/fill volumes that will be required at reclamation of the road to the Chapter 5 narrative and Table 5J-2.

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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 failing to update Table 5J-2 Lower Conveyor Access Road Cut and Fill volumes in Chapter 5. R645 regulations require a detailed general backfill and grading plan that describes 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. The amendment failed to update relevant backfill and grading volume tables and narrative within Chapter 5, Construction Description (page 5J-3). The #2 Belt access road is of a relatively short length, within disturbed area, and joined with the Lower Conveyor access road no addition slope stability will be required. Plate 2-2B shows the typical cross sections of soil to be removed and Plate

5-2F of the surface facilities was updated to reflect the addition.

*Deficiencies Details:*

R645-301-521.170, R645-301-527.200 through -527.230, R645-301-534, R645-301-553: The Permittee shall add the additional 150 CY of topsoil removal and additional cut/fill volumes that will be required at reclamation of the road to the Chapter 5 narrative and Table 5J-2.

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## Road System Reclamation

*Analysis:*

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

The requirements of R645-301-534 are not met within the amendment as there is no change to the existing MRP reclamation of roads throughout the permitted area in terms of regrading volume associated with the additional #2 Belt access road to return the site to the grade shown on Plate 5-6F.

*Deficiencies Details:*

R645-301-521.170, R645-301-527.200 through -527.230, R645-301-534, R645-301-553: The Permittee shall add the additional 150 CY of topsoil removal and additional cut/fill volumes that will be required at reclamation of the road to the Chapter 5 narrative and Table 5J-2.

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## Maps Reclamation Backfilling and Grading

*Analysis:*

The amendment meets the State of Utah R645 requirements for Reclamation Backfilling and Grading Maps.

The requirements of R645-301-542 are met within the amendment as there is no change required to the existing MRP plan of backfilling and grading areas or volumes, the final grading at reclamation of #2 Belt Access road is included in grading areas shown on Plate 5-6F.

cparker

## Bonding and Insurance General

*Analysis:*

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

The amendment meets the 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 meets the State of Utah R645 requirements for Form of Bond.

The amendment meets the requirements of R645-301-860.100 as the applicant currently maintains a surety bond amount of \$2,210,000 which is held by Western Surety Company.

cparker

## Bonding Determination of Amount

*Analysis:*

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

The amendment does not meet the requirements of R645-301-830.140 as the Permittee failed to submit detailed updated bond information in regards to the amendment. The bond amount must reflect to total worst case scenario which now includes the reclamation of the #2 Belt access road. The Permittee shall submit updated bond sheets reflecting the additional grading require at reclamation.

*Deficiencies Details:*

R645-301-830.140: The Permittee shall submit updated bond sheets reflecting the additional grading require at reclamation for the #2 Belt Access road.

cparker

**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 requirements of R645-301-850 as the applicant currently holds liability insurance through National Union Fire Ins Co, effective until 6/1/16. The insurance includes the required Marsh from, explosives and claims made per occurrence.

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