

# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

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April 18, 2005

TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor

THRU: James Smith, Team Lead

FROM: Wayne H. Western, Environmental Scientist III

RE: New Surface Facilities in Rilda Canyon, PacifiCorp, Deer Creek Mine, C/015/0018 and Task ID #2195

## **SUMMARY:**

The Permittee submitted a plan on December 21, 2004 “Deer Creek Mine North Rilda Canyon Portal Facilities”. This plan includes disturbing surface areas for a portal, sediment pond, storage areas, approximate 157 stall parking lot, bathhouse, parking garage, and other small facilities. The Permittee has thoughtfully limited the footprint of disturbance by moving the facilities area to avoid stream alterations as well as building a three-story building.

In April 2005, the Permittee responded to deficiencies from the original submittal. The Division assigned task number 2195 to the project.

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**TECHNICAL ANALYSIS:**

## **GENERAL CONTENTS**

### **PERMIT AREA**

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

#### **Analysis:**

The Permittee will not change the permit boundary in connection with the North Rilda Canyon Portal Facilities. They will increase the disturbed area boundary as follows:

- Mine facilities 9.0 acres.
- Topsoil disturbed area 1.1 acres.
- Subsoil/construction soil disturbed area 3.0 acres.
- **Total of 13.1 acres of new disturbance.**

#### **Findings**

The information provided by the Permittee is adequate to meet the minimum requirements of this section of the regulations.

## **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:**

##### **Affected Area Boundary Maps**

The Permittee showed the permit area on several maps including Drawing CE-10522-DR, Coal Ownership Map of the Deer Creek Mine Permit Area.

##### **Existing Structures and Facilities Maps**

Map 500-1, Deer Creek Mine Rilda Canyon Pre-Disturbance Topography, shows the location of the existing facilities in Rilda Canyon. The map shows the location of surface features, public roads within 100 feet of the permit area and the location of coal waste. Large

parts of the area in and around portal facilities were disturbed. AML reclaimed some of the areas disturbed by coal mining. The Permittee shows areas of mining and reclamation on Map 500-1 Sheet 1-3.

Map 500-1 Sheet 1 of 3 is at a scale of 1 inch equal 300 feet and shows the Emery County road to Highway 31. Map 500-1 Sheet 2 of 3 is an aerial photography of the area at a scale of 1 inch equals 100 feet. Map 500-1 Sheet 3 of 3 is a topography map of the area at a scale of 1 inch equals 100 feet.

Map 500-1 Sheet 1 of 3 and Sheet 3 of 3 do not show the existing road that the Permittee will use to access the topsoil storage site.

#### **Existing Surface Configuration Maps**

Map 500-1 Sheet 3 of 3 shows the existing contours at a scale of 1-inch equals 100 feet. Map 500-4 Sheet 1-5 shows the existing cross sections.

#### **Mine Workings Maps**

There has been some historic mining in the canyons east of the lease tract, but no mining has occurred within the Mill Fork Lease boundary. The Permittee has submitted maps showing the underground mine working associated with the Mill Fork Lease. The maps show active, inactive and abandoned underground mine workings of Genwal Coal Company, Skeen Mine, Helco Mine, Huntington #4 Mine, and the Deer Creek Mine.

The Permittee has given mine projection for the Blind Canyon and Hiawatha coal seam in the Mill Fork Lease. Map MFU-1840D gives the mining sequence for nineteen years in the Hiawatha Seam. These maps are projections and can change in the future due to ground condition, roof control, coal quality, mineable reserves and coal market.

#### **Permit Area Boundary Maps**

The Permittee shows the permit area boundary on several maps including maps MFU-1823D, MFU-1824D, MFU-1825D, MFU-1826D, MFU-1827D and MFU-1828D and MFU-1824D.

#### **Findings:**

The information provided is not adequate to meet the requirements of the Maps, Plans and Cross-Sections of Resource Information section of the Coal Mining Rules. Before approval, the Permittee must provide the following in accordance with:

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**R645-301-521.123 and R645-301-521.190**, The Permittee must show the location of the Forest Service road that accesses the topsoil storage location on the existing, operational and reclamation maps.

## OPERATION PLAN

### MINING OPERATIONS AND FACILITIES

Regulatory Reference: 30 CFR 784.2, 784.11; R645-301-231, -301-526, -301-528.

#### Analysis:

##### *General*

The Permittee plans to conduct underground mining within the Mill Fork Lease. All coal will be shipped out of the mine by conveyor belt to the existing Deer Creek coal handling facilities. Miners and some of the material will enter the Deer Creek mine by the portal at Rilda Canyon. The Permittee has mentioned in the proposal that surface facilities may be constructed at Crandall Canyon. This would be a separate action and is not considered in this review.

##### *Facilities and Structures*

The Permittee adequately addressed the general requirements of R645-301-526 and R645-301-528 by providing a narrative of the type of structures and facilities at the North Rilda surface facility. In addition, the Permittee also described the handling of coal and coal mine waste at the site.

The Permittee gave a description of the surface facilities that will be at the North Rilda Canyon Portal Facility in Section 521.180 of the MRP. Specific structures that are missing from the list include:

- Generator
- Transformer
- Fuel tank for generator
- Bunker with noncoal waste, sand storage and rock waste.
- Gravel storage
- Covered storage
- Rock dust silo
- Oil Shed

- Fuel Dock
- Pump station and generator
- Trail parking area.

The Permittee must list all structures that they plan to construct at the North Rilda Portal Facilities in Section 521.180 of the MRP.

### **Findings**

The Permittee has not met the minimum requirements of the Mining Operations and Facilities section of the R645 Coal Rules. Before approval, the Permittee must submit the following in accordance with:

**R645-301-521.180 and R645-301-521.190**, All items shown on the Map 500-3 must be listed in Section 521.180 and the reverse must occur. Examples include but are not limited to the generator, transformer, fuel tank for generator, bunker for noncoal waste – sand storage – rock waste, gravel storage, covered storage, rock dust silo, fuel dock, pump station – generator and trail parking area.

### **EXISTING STRUCTURES:**

Regulatory Reference: 30 CFR 784.12; R645-301-526.

### **Analysis:**

The Permittee addressed how they will use the existing structures in connection with the North Rilda Portal Facilities site. The existing structures within the disturbed area boundary that will be used are:

- The 25 KV powerline.
- Emery County Road #306.

The Division addressed the requirements for the use and realignment of the County Road 306 in the Relocations or Use of a Public Road section of the TA. The Permittee addressed how they will modify the existing 25 KV powerline in connection with North Rilda Portal Facilities in Section R645-301-521.180 of the MRP.

### **Findings:**

The information provided in the proposal is adequate to meet the requirements of the existing structure section of the regulations.

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## RELOCATION OR USE OF PUBLIC ROADS

Regulatory Reference: 30 CFR 784.18; R645-301-521, -301-526.

### Analysis:

PacifiCorp has or will have two agreements for either relocating a public road or conducting mining within 100 feet of a public road. The agreements are as follows:

- Agreement #1 is with ECSSD and allowed the Permittee to reconstruct, realign, widen and surface County Road #306. The County agreed to the modifications for increases in speed and traffic.
- Agreement #2 will allow a portion of County Road #306 to be temporarily restricted to public use. See Section R645-301-526.116.1. Figure R645-301-500c shows the location of the road and a typical road section. ECSSD has not signed the agreement.

The Permittee must state what actions that they will take to protect the public when the Permittee is conducting mining operations within 100 feet of a public road. Specifically the Division needs to know what steps to protect the public will be taken when the Permittee is conducting mining and reclamation activities at the topsoil and subsoil storage sites and trailhead. Examples of methods to protect the public include flag persons, warning signs and barricades.

### Findings:

The information provided is not adequate to meet the requirements of this section of the regulations. Before approval, the Permittee must provide the following in accordance with:

**R645-301-521.133.1**, The Permittee must list those measures that they will take to protect the public when mining and reclamation activities occur within 100 feet of a public road. Specific issues include protecting the public during mining and reclamation activities at the topsoil and subsoil storage areas and when the trailhead is reclaimed. Examples of methods to protect the public include flag persons, warning signs and barricades.

**R645-301-122**, The Permittee must include a signed copy of the Agreement #2 that will allow a portion of County Road #306 to be temporarily restricted to public use.

## AIR POLLUTION CONTROL PLAN

Regulatory Reference: 30 CFR 784.26, 817.95; R645-301-244, -301-420.

**Analysis:**

The Permittee committed to have an air quality approval order that would allow the Permittee to conduct mining operations at the North Rilda Canyon Portal Facilities before construction and operations.

The Division conducts monthly inspections of the Deer Creek Mine. As part of those inspections, the Division checks to see if the air quality orders are current. If the Permittee does not have a current air quality order, the Division will take enforcement action or refer the matter to the Division of Air Quality.

**Findings:**

The information provided in the application is adequate to meet the requirements of this section of the R645 Rules.

**COAL RECOVERY**

Regulatory Reference: 30 CFR 817.59; R645-301-522.

**Analysis:**

The BLM will revise the R2P2 in connection with the North Rilda Canyon Portal Facilities. After the BLM revises the R2P2, the Permittee must include an updated copy of the R2P2 or other relevant information in the MRP.

**Findings:**

The information provided in the proposal is not considered adequate to meet the requirements of the coal recovery section of the regulations. Before approval, the Permittee must provide the following in accordance with:

**R645-301-122**, The Permittee must provide the Division with an updated copy of the R2P2 or equivalent information when that information becomes available.

**SUBSIDENCE CONTROL PLAN**

Regulatory Reference: 30 CFR 784.20, 817.121, 817.122; R645-301-521, -301-525, -301-724.

**Analysis:**

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### **Subsidence Control Plan**

The Division consulted with the Bureau of Land Management and the Forest Service about subsidence related issues. All agencies agreed that the addition of the North Rilda Portal Facilities would not result in any additional subsidence. The Permittee does not plan to subsidize any part of the North Rilda Portal Facilities disturbed area.

#### **Findings:**

The information provided in the subsidence control plan is considered adequate to meet the minimum requirements of this section.

### **SLIDES AND OTHER DAMAGE**

Regulatory Reference: 30 CFR Sec. 817.99; R645-301-515.

#### **Analysis:**

There should be no slides occurring in the Mill Fork lease area because all mining activities are underground. If slides would occur, it would most likely be caused by subsidence. The area where slides would most likely occur is along the escarpments. The remedy for these slides would fall under the subsidence mitigation plan.

The Permittee has a plan in place to notify the Division should a slide occur and what action is needed to protect the public.

#### **Findings:**

The Permittee has met the minimum requirements of the slides and other damage section of the regulations.

### **ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES**

Regulatory Reference: 30 CFR Sec. 784.24, 817.150, 817.151; R645-301-521, -301-527, -301-534, -301-732.

## **Analysis:**

### **Road Classification System**

The only road that is constructed for the North Rilda Portal Access area is in the main mine area. The Division and the Permittee classified the road as primary. See Section 645-301-527.100.

### **Plans and Drawings**

The plans and maps for the North Rilda Portal Facility primary road are in Section R645-301-527.100, Road Classification and on Map 500-3. The road was designed to accommodate supply trucks and mining related activities.

### **Performance Standards**

Design requirements include:

- Map 500-3 shows the location of the road and a typical cross section.
- Because of the diversion ditches, there are no intermittent or perennial streams in the pad area.
- The Permittee will not use any temporary routes to ford streams.
- The Permittee will not alter any nature streams in connection with road construction.
- There are not low water crossings.
- The Permittee will remove and then reconstruct the road so it will be part of Emery County Road 306.

Performance standards for the road include:

- The Permittee paved the road to control erosion, and air pollution.
- See the biology sections for information about how the Permittee constructed the road/main mine area to control damage to fish and wildlife.
- See the hydrology sections for information about how the Permittee constructed the road/mine area to hydrologic impacts.
- The Permittee used native soils/materials to construct the sub base. See the soil sections for information about acid and toxic forming materials.
- The Permittee must maintain the road according to the regulations.

Primary design standards include:

- The Permittee certified the road design on Map 500-3.

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- The Permittee did not discuss the 1.3 safety factor.
- The portal facility design took into account ways to minimize erosion.
- There are not fords.
- See the hydrology sections for culvert design.
- The Permittee pave the road with 4 inches of asphalt. The Division considers that adequate.

### **Primary Road Certification**

The primary road for the North Rilda Portal Facility was certified by a licensed professional engineer.

### **Other Transportation Facilities**

There are no other transportation facilities are the North Rilda Portal Facility.

### **Findings:**

The Permittee did not meet the minimum requirements of the road system and other transportation facilities section of the regulations. Before approval, the Permittee must provide the following in accordance with:

**R645-301-534.130**, The Permittee must discuss how the road embankments will meet the 1.3 minimum safety factor requirement.

## **SPOIL AND WASTE MATERIALS**

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

### **Analysis:**

#### **Disposal Of Noncoal Mine Wastes**

The Permittee will temporarily store all noncoal mine waste in a temporary storage facility shown on Map 500-3. They will permanently dispose of all noncoal mine waste in an approved disposal facility.

#### **Coal Mine Waste**

In Section R645-301-536, the Permittee states:

Limited amounts of coal mine waste will be temporarily stored in this facility before being permanently stored at the Deer Creek Mine waste rock site.

The plan does not contain enough information for the Division to evaluate the effectiveness of the coal mine waste handling plan. At a minimum the Permittee must:

- Describe the temporary storage location (rock waste bunker.) The Permittee refers to a temporary coal mine waste storage facility in Section R645-301-536 but refers to that facility in all other sections as a rock waste site.
- Describe the maximum time that the material would remain at the Rilda Canyon Portal Facility.
- Describe the maximum amount of material temporarily stored at the Rilda Canyon Portal Facility.

#### **Refuse Piles**

No new refuse piles will be associated with the Rilda Canyon Portal Facility. See Volume 10 of the MRP for details of the refuse pile.

#### **Impounding Structures**

No impounding structure was constructed of coal mine waste or was intended to impound coal mine waste at the Rilda Canyon Portal Facility.

#### **Return of Coal Processing Waste to Abandoned Underground Workings**

The Permittee has no plans to return coal processing waste underground.

#### **Excess Spoil:**

No excess spoil will be generated from mining activities at Rilda Canyon Portal Facility. Underground development waste generated from the Mill Fork lease will not be classified as excess spoil.

See Vol. 2, Part 3 of the MRP.

#### **Findings:**

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The Permittee did not meet the minimum requirements of this section of the regulations. Before approval, the Permittee must provide the following in accordance with:

**R645-301-528**, The Permittee must include in the narrative a statement about the temporary storage of coal mine waste at the North Rilda Portal Facility. Specific issues that must be addressed are: 1) the Permittee must refer to the coal mine waste storage area as the rock waste site (that is what the facility is referred in the rest of the MRP: see Section R645-301-536 of the MRP); 2) the maximum amount of time coal mine waste can be stored at the North Rilda Portal Facility, and 3) the maximum volume/weight of material that can be stored on site.

## SUPPORT FACILITIES AND UTILITY INSTALLATIONS

Regulatory Reference: 30 CFR Sec. 784.30, 817.180, 817.181; R645-301-526.

### Analysis:

The Division discussed the support facilities in the mining and operations and facilities section of the TA. The Division found that some information on support facilities was deficient and discussed those deficiencies in the mining and operations and facilities section of the TA.

The Permittee described the support facilities in various sections of the MRP. Section R645-301-521.180 list the support facilities and give a description. Map 500-3 shows the location of the support facilities and a cross section of the primary road.

See the biology and hydrology operational sections of the TA for how the support facilities and utility installations met the requirements for controlling water pollution and siltation and damage to fish and wildlife.

The support facilities for the Rilda Canyon Portal Facilities are located away from by oil, gas, and water wells; oil, gas, and coal-slurry pipelines, railroads; electric and telephone lines and sewage lines. The water lines were relocated as needed or the Permittee designed the facilities so as not to disrupt water supplies.

The Division conducts monthly inspections to verify that the Permittee is operating support facilities in accordance with the regulations.

### Findings:

The Permittee meet the minimum requirements for the support facilities and utility installations section of the regulations

## **SIGNS AND MARKERS**

Regulatory Reference: 30 CFR Sec. 817.11; R645-301-521.

### **Analysis:**

The Permittee met the requirements for placing signs and markers. They committed to meet the relevant requirements as listed in R645-301-521.200.

### **Findings:**

The Permittee met the minimum requirements for signs and markers section of the regulations.

## **USE OF EXPLOSIVES**

Regulatory Reference: 30 CFR Sec. 817.61, 817.62, 817.64, 817.66, 817.67, 817.68; R645-301-524.

### **Analysis:**

#### **General Requirements**

In Section R645-301-524.200 of the MRP, the Permittee states that they will submit a blast design for shots using more than 5 pounds of explosive. R645-301-524.200 and R645-301-524.220 require that the blast design be submitted either as part of the application or as a separate amendment. The five pound rule does not apply to whether or not a blast design is approved.

#### **General Performance Standards**

In Section R645-301-524.200 of the MRP, the Permittee states that they will submit a blast design for shots using more than 5 pounds of explosive. R645-301-524.200 and R645-301-524.220 require that the blast design be submitted either as part of the application or as a separate amendment. The five pound rule does not apply to whether or not a blast design is approved.

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**Findings:**

The Permittee did not meet the minimum requirements of this section of the regulations. Before approval, the Permittee must provide the following in accordance with:

**R645-301-524.200 and R645-301-524.220**, The Permittee submit a blasting plan for each blast. The five-pound exemption involves preblast surveys (See R645-301-524.300.)

**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:**

**Mining Facilities Maps**

Map 500-3, Deer Creek Mine Rilda Canyon Surface Facilities shows the following:

- Buildings,
- Utility corridors
- Roads,
- Topsoil and subsoil storage areas
- Underground development waste (rock waste) temporary storage
- Noncoal waste storage area;
- Water diversion, collection, conveyance, treatment, storage and discharge facility
- Sedimentation pond
- Cross sections of the surface configuration during mining operations.

**Mine Workings Maps**

Map 500-3, Deer Creek Mine Rilda Canyon Surface Facilities shows the following:

- The location and extent of known workings of proposed, active, inactive, or abandoned underground mines within the Rilda Canyon Portal Facility area.
- Mine openings to the surface within the Rilda Canyon Portal Facility area.
- Location and extent of existing or previously surface-mined areas within the within the Rilda Canyon Portal Facility area.

## **Monitoring and Sampling Location Maps**

### **Certification Requirements**

#### **Findings:**

The Permittee did not meet the minimum requirements of this section of the regulations. Before approval, the Permittee must provide the following in accordance with:

**R645-301-521.124**, The Permittee show the location of the noncoal waste storage site on the operations map, Map 500-3.

## **RECLAMATION PLAN**

### **GENERAL REQUIREMENTS**

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

#### **Analysis:**

In Section R645-301-541.300 of the MRP, the Permittee states:

All asphalt material from the disturbed area will be excavated and taken to a permitted class IV landfill.

The Permittee will not modify the spring collection system during reclamation.

#### **Findings:**

The Permittee met the minimum requirements of this section.

## **APPROXIMATE ORIGINAL CONTOUR RESTORATION**

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Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

**Analysis:**

The definitions of Approximate Original Contour (AOC) are contained in SMCRA and the R645 Rules. The objectives of AOC requirements are that the final surface configuration shall closely resemble the general surface configuration of the land before mining. Note: the requirement to return the disturbed area to the approximate original contour does not necessarily mandate that the site be restored to the original elevation. Therefore, the main criterion for compliance with AOC is “Does the postmining topography, excluding elevation, closely resemble its premining configuration?”

The Division examined the premining and postmining cross-sections and determined:

- The main mine site will be restored to the approximate premining configuration. The reclaimed slopes will be slightly smoother than the natural slopes. However, pocking will roughen the final surface so that it will look more natural than standard grading methods. See Map 500-4 Sheet 1 of 5 and Sheet 2 of 5.
- The topsoil storage site will be restored to the original contours. See Map 500-4 sheet 3 of 5.
- The subsoil/construction fill storage site will be restored to the original contours. See Map 500-4 sheet 4 of 5.
- The sediment pond area will be restored to a slope configuration similar to the premining slope. See Map 500-4 sheet 5 of 5, which shows how the reclaimed site will blend into the surrounding area.
- Map 500-5, Final Reclamation Topography, shows that the reclaimed site will blend into the surrounding area. The reclaimed site which will have slope of no more than 2H:1V will smoothly transition into the steeper surrounding hill or into the gentler stream bed area.

Specific items that the Division uses to determine if the AOC requirements will be met include:

- All spoil piles will be eliminated. The Permittee estimates that at final reclamation there will be approximately 6,000 cubic yards of excess material. The total amount of fill is 110,982 cubic yards and the total amount of fill is 110,982 cubic yards. The fill material will come from the subsoil storage area or the topsoil storage area. The Permittee will place 2 feet of topsoil at the site.
- Elimination of all highwalls. There will be two highwalls at the North Rilda Portal Facility. The highwalls are shown on Map 500-4 sheet 1 of 5 at cross-section 2+50 and 5+00. The

highwall areas are also shown on contour Map 500-5. On both maps, the Permittee shows that the highwalls will be eliminated.

- Hydrology. The two major hydrologic concerns are drainage restoration and sediment control. The Division considers that those issues were adequately addressed if the general hydrology regulations were addressed. The Permittee will install silt fences during reclamation and the silt fences will remain in place for a minimum of two years after vegetation has been established.
- Postmining Land Use. The Division considers that the site met all AOC issues related to postmining land use if the site met the general postmining land use regulations.

### **Findings:**

The Permittee met the minimum requirements of the approximate original contour section of the regulations.

## **BACKFILLING AND GRADING**

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

### **Analysis:**

#### **General**

The general backfilling and grading requirements for the Rilda Canyon Portal Facility are:

- Achieve the approximate original contour requirements. The Division determined that the site meet those requirements. See the AOC section of the TA for details.
- Eliminate all highwalls, spoil piles and depressions. The highwall and spoil pile issues were addressed in the AOC section of the TA. The reclaimed surface as shown on Map 500-4 and 500-5 show that no depressions will be left. Minor depression from pocking and other surface roughening methods will leave minor depressions needed for micro environments, slope stability and erosion control.
- Slope Stability. In Section R645-301-553.140 of the MRP, the Permittee stated that the reclaimed slopes will not exceed 2H:1V, the soils will have similar characteristics to material used to reclaim the Des Bee Dove Mine. Since the two sites are similar, the North Rilda Portal area will have slopes that meet the minimum 1.3 safety factor requirement. Since the plans are certified by a professional engineer, the Division will accept the safety factor analysis.

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- The Division considers that the erosion and water pollution both on and off the site will be minimized if the general hydrologic requirements are adequately addressed.
- The Division considers that the postmining land use will be met if those requirements have been adequately addressed.

Specific backfilling and grading issues are:

- Settled and revegetated fills. There are no settled and revegetated fills in the area that the Permittee proposes to leave that do not meet the general backfilling and grading requirements.
- There are no toxic or acid forming materials on the site.
- There are no exposed coal seams on the site.
- There will be no cut and fill terraces on the site.
- Pocking and other surface roughening methods will ensure that topsoil slippage is minimal.

### **Previously Mined Areas**

The provisions of the previously mined areas allow a Permittee to only partially reclaim highwalls under specific circumstances. None of those circumstances exists at the site because all highwalls will be constructed post-SMCRA. The Permittee committed to reclaim all highwalls that they create.

### **Findings:**

The Permittee met the minimum requirements of the backfilling and grading section of the regulations.

## **MINE OPENINGS**

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

### **Analysis:**

In Section R645-301-550 of the MRP, the Permittee states that portal sealing plan. The plan meets the Division and MSHA requirements by having a block seal 25 feet from the opening and then backfilled. The drill hole used to pump gray water into abandoned workings will be plugged and then backfilled with concrete.

### **Findings:**

The Permittee met the minimum requirements of the mine opening section of the regulations.

## **ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES**

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645-100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

### **Analysis:**

#### **Reclamation**

The pavement within the main North Rilda Portal Facility will be reclaimed as part of the general backfilling and grading plan.

The Permittee will realign and resurface the main haul road (County Road 306) during reclamation. See Section R645-301-526.116.2.

The Permittee and Emery County are still working on an agreement for the realignment of County Road 306. When that agreement is completed, the Permittee must incorporate the agreement into the MRP.

### **Findings:**

The Permittee did not meet the minimum requirements of the road systems and other transportation facilities section of the regulations. Before approval, the Permittee must submit the following information in accordance with:

**R645-301-542.600**, The Permittee must include a detailed plan for the realignment of County Road 306 in the MRP. The agreement must specifically state if the County or the Permittee will be responsible for doing the work. If the Permittee is responsible for the work then plans for the realigned road must be included in the MRP.

## **MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS**

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

### **Analysis:**

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**TECHNICAL MEMO**

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**Affected Area Boundary Maps**

The Division usually considers the affected area to be equivalent to the permit boundary. Several maps show the permit boundaries including Drawing MFU1840D, Deer Creek Mine Mill Fork Lease ML-48258 Hiawatha Mine Plan.

**Bonded Area Map**

Map 500-5, Deer Creek Mine Rilda Canyon Final Reclamation Topography, is adequate because it shows the disturbed area boundaries.

**Reclamation Backfilling And Grading Maps**

The backfilling and grading maps and cross sections are shown on Map 500-4 and Map 500-5. The Maps are at a scale of 1 inch equal 100 feet and the cross-sections are vary between 1 inch equals 60 feet and 1 inch equals 40 feet.

**Reclamation Facilities Maps**

The Permittee shows the reclamation facilities on Map 500-5. The map is adequate because it shows the reclamation facilities such as the restored trailhead and public parking lot.

**Final Surface Configuration Maps**

The final surface configuration for the North Rilda Portal Facility is shown on Map 500-4 and Map 500-5.

**Findings:**

The Permittee met the minimum requirements of this section of the regulations.

**BONDING AND INSURANCE REQUIREMENTS**

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

**Analysis:**

**General**

The Permittee did not include detailed reclamation cost estimates.

The Permittee stated in Section R645-301-800:

When the application for the Rilda Canyon Portal Facilities is approved, the bond will be updated to reflect the added facilities.

The Division cannot approve the amendment until the reclamation costs have been approved and the bond is updated. The Division recommends that the Permittee make a commitment to include the bond calculations later.

**Findings:**

The Permittee did not meet the minimum requirements of the bonding and insurance section of the regulations. Before approval, the Permittee must provide the following in accordance with:

**R645-301-830**, The Permittee submit adequate reclamation cost estimates and have adequate bond before the amendment approval. To avoid confusion Division recommends that the Permittee make a general comment that the reclamation cost estimates will be included later.

**RECOMMENDATIONS:**

The Division should deny the amendment until all of the above mentioned deficiencies have been addressed.