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SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

BRIAN C. STEED
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Division of Oil, Gas and Mining

JOHN R. BAZA
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January 6th, 2020

Dennis Oakley, Senior Mining Engineer
PacifiCorp
c/o Thermal Generation Environmental Services
1407 W. North Temple, Suite 210
Salt Lake City, Utah 84116

Subject: North Rilda Post Reclamation As-Built, PacifiCorp, Deer Creek Mine,
C/015/0018, Task #6013

Dear Mr. Oakley:

The Division has reviewed your application. The Division has identified deficiencies that must be addressed before final approval can be granted. The deficiencies are listed as an attachment to this letter. The deficiencies authors are identified so that your staff can communicate directly with that individual should questions arise. The plans as submitted are denied.

As we discussed on the phone last week, the Division field verifies as-built information when it's submitted for inclusion into an approved Mining and Reclamation Plan. In the case of the Rilda Canyon facility, it's our understanding that the watershed stabilization work being conducted by Emery County and the NRCS has yet to be completed. As a result, the Division would be unable to provide final approval for this amendment until such time that the field work could be conducted. Once the work has been completed and conditions allow for a thorough inspection of the site, we would welcome the resubmission of the as-built amendment for formal review.

If you have any questions, please call me at (801) 538-5350.

Sincerely,

Steve Christensen
Coal Program Manager

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Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0150018
TaskID: 6013
Mine Name: DEER CREEK MINE
Title: NORTH RILDA POST RECLAMATION AS-BUILT

Operation Plan

Relocation or Use of Public Roads

Analysis:

The amendment meets the State of Utah R645 requirements for Relocation or Use of Public Roads.

The amendment satisfies the R645 requirements because of language on page 30 of the application that offers a description of the road and a brief history of its use throughout the time the Permittee was actively producing coal. To accommodate the surface facilities in Rilda Canyon, approximately 2,300 feet of County Road #306 was eliminated and public use suspended. Upon reclamation, the suspended portion of the road was reconstructed in its original location and public access restored. Figure R645-301-500c in the Figures section of Volume 11 shows the location of the road and a typical road section.

The portion of County Road that was eliminated effectively blocked public access to a segment of Forest Service trail system in the canyon. In response to this, the Permittee constructed a new trailhead and parking lot to the east of where the facilities used to reside which bypassed the facilities and road closures altogether. The bypass trail ran parallel to Rilda Creek and reconnected to the existing trail as shown on Figure R645-301-500c. The application clarifies that plans within the MRP called for the removal of the bypass trail upon reclamation but was indirectly removed as a consequence of firefighting efforts and drainage reconstruction activities in Rilda Canyon during the Summer of 2018. Reclamation activities at the Rilda Canyon portal site have been completed and County Road restored thereby rendering the bypass trail unnecessary.

jeatchel

Reclamation Plan

General Requirements

Analysis:

The amendment does not meet the State of Utah R645 rules for General Reclamation Requirements.

The amendment does not satisfy the Utah Coal Rules for general reclamation requirements because the narrative on page 34 of Volume 11 contains contradictory language that implies the Permittee intends to abandon reclamation liabilities for certain sections of the permit that were damaged by the Forest Service. The narrative states that the disturbed areas in the vicinity of the Rilda Canyon Portal Facilities were affected by several large runoff events that were the result of the Trail Mountain Fire which occurred in June 2018. The severity of the fire and subsequent runoff events created a need to construct engineered drainages and a diversion structure to direct water offsite and away from critical spring collection systems located between the portal facilities and a topsoil storage area. In constructing these features,

the Forest Service damaged a small area of land within the disturbed area boundary with the use of heavy equipment. The Legend clarifies that the total acreage damaged amounted to 0.28 acres (0.79 total acres disturbed by 3rd Party minus 0.51 acres for the topsoil pile). The Permittee is requesting to remove those damaged areas from the permit without reclamation efforts nor bond release. The damaged acreage is labeled with an orange hatch pattern south of County Road #306 in Figure C.

The narrative goes on to state that Emery County has plans to construct sediment control and diversion structures over a 0.51-acre topsoil storage site, thus absolving the Permittee of further reclamation efforts in this area. A 10 year liability period is not applicable for the 0.51-acre area because the county has plans to hard armor the site with rip rap and neither topsoil nor vegetation will be placed in this area.

Deficiencies Details:

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

R645-301-521, -121.200: The Permittee must provide a clear plan for the reclamation of 0.28 acres within the disturbed area boundary of the Rilda Canyon Portal Facilities that were damaged by the Forest Service when constructing diversion structures.

jeatchel

General Requirements

Analysis:

The amendment does not meet the State of Utah R645-301-341 General Requirements for reclamation.

According to multiple maps in the amendment, such as Drawing 500-5 (Deer Creek Mine Rilda Canyon Post Reclamation Topography) and Drawing 700-4 (Deer Creek Mine Rilda Canyon Reclamation Hydrology Aerial), there is a total area of 0.79 acres of "USFS Trail Mountain Wildfire Third Party Interference." Of this total, 0.51 acres is comprised of the topsoil storage area leaving a presumed 0.28 acres of other land considered by the company as third party interference area. In Section R645-301-530 Operational Design Criteria and Plans, page 34 of the Engineering portion of the amendment, the amendment states that "PacifiCorp is asking that the Rilda Canyon Portal Site disturbed area be reduced to exclude," presumably, the 0.28 acres of land due to damage caused by Forest Service crews during their firefighting efforts in 2018. However, in Section R645-301-340 Reclamation Plan, page 25 of the Biology portion of the amendment, it states "All disturbed lands (with the exception of the 0.51 acre topsoil storage site) will be reclaimed as part of the post mining land use stipulations for grazing, wildlife and recreation." This statement contradicts the Engineering section's statement excluding not only the 0.51-acre topsoil storage area, but an additional 0.28 acres of "damaged areas" also. Clarification is needed to justify this discrepancy.

Deficiencies Details:

The amendment does not meet the State of Utah R645-301-341 General Requirements for reclamation. The following deficiency must be addressed prior to final approval:

R645-301-341: The Permittee must clarify the disturbed acreage yet to be reclaimed as well as how the Permittee proposes that the disturbed area boundary could be adjusted without a Phase III bond release.

trmiller

Topsoil and Subsoil

Analysis:

The application does not meet the State of Utah R645 requirements for Soils: Performance Standards, Reclamation Plan and Soil Stabilization.

TOPSOIL STORAGE AREA RECLAMATION

The topsoil storage site was not stabilized. The Permittee must seed the the topsoil storage disturbed area to stabilize the site until construction occurs and to ensure that the portion of the topsoil storage area that is not rip-rapped or part of the Springs Access Raod will be vegetated.

In May 2019, the topsoil and substitute topsoil stored on 0.51 acres was removed to the Rilda facilities area and sediment pond. The former storage area was left roughened and bermed, in preparation for its post mining land use as a rip-rapped diversion structure to protect the North Emery Water Users Special Service District (NEWUSSD) spring collection area (Vol 11, Section R645-301-222, p. 4).

The NEWUSSD construction plans are found in Hydrology Volume Appendix E. Sheets 5 and 20 illustrate the project in the vicinity of the former topsoil storage location. The work includes seeding off-site disturbed areas with the seed mix found on page 96-L of the contract specification (e-p. 270). As of December 2019, the NEWUSSD plans were not fully implemented, which has left the disturbed topsoil storage area soils unprotected for 7 months. Even upon completion of the NEWUSSD construction, a small portion of the topsoil storage area will be left unprotected.

MRP Section R645-301-240 states, "...the temporary use areas (laydown areas) used during construction will be roughened and seeded (as required by the SWPPP) immediately after construction is completed or the contractor no longer requires a use for those areas." Therefore, the Permittee must seed that portion of the topsoil storage area that is not rip-rapped or part of the Springs Access Road as shown on Sheet 5 of Appendix E.

RILDA FACILITIES AND SEDIMENT POND RECLAMATION

The Rilda Canyon sediment pond and portal facilities areas were backfilled and graded and covered with a foot of topsoil. Ripping to two foot depth was unnecessary because the redistributed fill was not compacted. Approximately 4,285 cu yds of topsoil were returned to the 4.0 acre surface facilities area, which equates to a 9 inch topsoil replacement depth. The 2,137 cu yds of substitute topsoil were returned to the 1.3 acre sediment pond area, which equates to one foot of substitute topsoil. (Volumes are from Section R645-301-231.100 and acreage is from R645-301-242).

At two locations on the 4 acre facilities pad, the replaced topsoil and fill were analyzed for suitability and nutrient analysis (MRP Vol. 11, Section R645-301-231.300 and Section R645-301-242). The MRP Section R645-301-231.300 states that the soil material would be sampled on 500 foot intervals to a depth of 4 feet. Therefore, a minimum of 4 holes in the 4 acre facilities area and at least one from the sediment pond area were required. In accordance with MRP Section R645-301-231.300, the Permittee must take two additional samples on 500 foot centers from the Rilda facilities and one sample from the sediment pond area. These samples will be analyzed for all parameters in Table 7 of the Division's Guidelines for Topsoil and Overburden.

[Note: Section R645-301-231.300 should reference sampling according to the parameters of Table 7 of the 2008 final guide rather than Table 6 of the 2001 draft guide.]

The analytical data taken from the two Rilda sample locations is presented in Volume 11 Appendix Volume A. Soils, Appendix E. Sampling locations are shown on the map included in Appendix E. Soils were analyzed by BYU Environmental Lab on July 18, 2019. As illustrated on the Appendix E map, samples were good to fair in most parameters. The pH values were similar to the Mt Nebo survey in 2004 at sites RC 1, 3 & 4, however the EC and SAR values are several orders of magnitude greater in this as-built analysis for the replaced soil. The 2004 sample locations are shown on Dwg 200-1 Soils Map.

Most concerning is the concentration of soluble selenium in the replaced soil, which exceeds the acceptable level of 0.15 mg/kg in every sample, including the surface 12 inches. The first sample location had selenium values of 0.32 to 0.66 ppm. The second sample location had selenium values of 0.33 – 0.49 ppm. The original soil survey selenium values were undetectable in both the EIS 2004 survey (Volume 11, Soils Appendix A) and the Mt. Nebo 2004 survey (Appendix B, Letter Attachment to Addendum #1).

The Division's stated selenium limits are based on water soluble or AB-DPTA analysis. The methodology of the BYU Lab analysis could not be confirmed with the Permittee or the Laboratory.

The Permittee must follow the Mining and Reclamation Plan strategy in Section R645-301-231.300, which is to sample on 100 foot centers to confirm the extent of high concentration of selenium in the regraded surface four feet. The Permittee shall work with the Division to design and implement the additional sampling to ensure that the analytical methodology is consistent with previous sampling and the requirements of the Utah Soil Guidelines. This additional sampling must be completed in 2020.

Should elevated soluble selenium levels be confirmed, monitoring may be required as described by the Division's Guidelines for Management of Topsoil and overburden (Jan 2008) Attachment #1 Placement Assessment and Monitoring in Reclaimed Environments of Materials Containing Selenium: A Program for Wyoming Surface Coal Mines 2nd version, June 1994.

SOIL STABILIZATION

The Rilda facilities and sediment pond sites were surface roughened (pocked). Boulders were randomly placed on the slopes. Seed mixes described in Tables 300-8, 300-9 and 300-10 were broadcast. Fertilizer (16-16-8) @ 40 lbs/ac and Urea (46-0-0) @ 50 lbs/ac was applied with 1,500 lbs/ac hydromulch and 500 lbs/ac tackifier (Section R645-301-243 and R645-301-340, p. 30).

According to MRP Sections R645-301-242 and 243, the application of soil amendments was based on soils analyses, but this information was not provided with the amendment. Please reference the location of the soil nutrient analyses in Section R645-301-243.

Deficiencies Details:

The application does not meet the State of Utah R645 requirements for Soil Stabilization. The following deficiency must be addressed prior to final approval:

R645-301-244.100: MRP Section R645-301-240 states, "...the temporary use areas (laydown areas) used during construction will be roughened and seeded (as required by the SWPPP) immediately after construction is completed or the contractor no longer requires a use for those areas." Therefore, the Permittee must seed that portion of the topsoil storage area that is not rip-rapped or part of the Springs Access Road as shown on Sheet 5 of Appendix E.

The application does not meet the State of Utah R645 requirements for Soil Performance Standards. The following deficiencies must be addressed prior to final approval:

R645-301-250: In accordance with MRP Section R645-301-231.300, the Permittee must take two additional samples on 500 foot centers from the Rilda facilities area and one sample from the sediment pond area. These samples will be analyzed for all parameters in Table 7 of the Division's Guidelines for Topsoil and Overburden.

R645-301-250: The Permittee must follow the Mining and Reclamation Plan strategy in Section R645-301-231.300, which is to sample on 100 foot centers to confirm the extent of high concentration of selenium in the regraded surface four feet. The Permittee shall work with the Division to design and implement the additional sampling to ensure that the analytical methodology is consistent with previous sampling and the requirements of the Utah Soil Guidelines. This additional sampling must be completed in 2020.

R645-301-250: According to MRP Sections R645-301-242 and 243, the application of soil amendments was based on soils analyses, but this information was not provided with the amendment. Please provide the soil nutrient analyses and reference the location of the analyses in Section R645-301-243.

pburton

Hydrological Information Reclamation Plan

Analysis:

The amendment does not meet the State of Utah R645 requirements for Hydrological Information: Reclamation Plan.

The Permittee submitted an amendment to the Division on November 6, 2019 to update Volume 11 of the Deer Creek Mine MRP. This update includes post reclamation as-built information for the North Rilda Portal Facilities. As part of this update the Permittee included changes to the Hydrology section of Volume 11. This update includes a description of post reclamation emergency changes to be made inside the disturbed area boundary by outside parties after the Trail Mountain Fire in 2018. Emergency work is performed by the Forest Service and Emery County to prevent damage from mudflows from the burn scars to valuable water sources controlled by the North Emery Water Users Special Service District. The Permittee then goes on to ask that the area damaged by this emergency work from the permitted disturbed area of their permit. However, any area to be removed from the permitted and disturbed area has to go through the bond release process as outlined in the R645 rules.

In addition to updates made to the Hydrology section of Volume 11. Map 700-4 Sheet 2 was added. However, the cover

page for "Volume 11, Appendix Volume B, Hydrology Maps" indicates that map 700-4 Sheet 1 should be replaced, but a Sheet 1 of this map was not provided. There are also discrepancies in the disturbed area boundary between the approved 700-4 Sheet 1 and the proposed 700-4 Sheet 2. This must be corrected.

Submitted in Appendix E of Volume 11, Appendix Volume B, the Permittee added specifications for the work to be done by the Emery County. This appendix is proposed work and has not yet been completed. As such, this is not "as-built" information and should not be submitted for reference into the MRP until work has been completed to ensure that the information is accurate.

Deficiencies Details:

The amendment does not meet the State of Utah R645 requirements for Hydrological Information: Reclamation Plan. The following deficiencies must be addressed prior to final approval:

R645-301-731.700 The cover page for "Volume 11, Appendix Volume B, Hydrology Maps" indicates that map 700-4 Sheet 1 should be replaced, but a Sheet 1 of this map was not provided. There are also discrepancies in the disturbed area boundary between the approved 700-4 Sheet 1 and the proposed 700-4 Sheet 2. These discrepancies must be corrected.

R645-301-760 The Emery County work specification information submitted in Appendix E is proposed work that has not been completed. Until all work has been completed, as-built information should not be incorporated into the MRP to ensure accuracy.

R645-301-760 Any area the Permittee wishes to remove from the permitted disturbed area must go through the bond release process as outlined in the R645 rules. The statements asking that the disturbed area of the Rilda Canyon Portal site be excluded from disturbed area must be removed.

adaniels

Revegetation General Requirements

Analysis:

The amendment does not meet the State of Utah R645-301-353 requirements for Revegetation General Requirements.

In numerous places throughout the Biology portion of the amendment, notably pages 17, 24, 25, and 29, the Permittee states that Emery County "has plans for constructing sediment control and diversion structures over the entire area of the 0.51 acre topsoil storage site (refer to Volume 11, Appendix Volume, Hydrology, Appendix E for plans and designs.)" Yet, as of the date of this amendment's submittal, these plans have not been implemented, so an "As-Built" amendment is difficult to evaluate without as-built structure in place. Without knowing what possible changes Emery County may have implemented in their "plans," an approval for an as-built cannot be granted.

Furthermore, in the Emery County plans cited above (Volume 11, Appendix Volume, Hydrology, Appendix E) on Sheet 20 the plan does not show rip-rap covering the entire topsoil storage area. The rip-rap is shown on approximately two-thirds of the area and a "Springs Access Road" is then shown bisecting the remaining topsoil storage area with space on either side of the road that would need revegetation, none of which is covered in the narrative.

Deficiencies Details:

The amendment does not meet the State of Utah R645-301-353 requirements for Revegetation General Requirements. The following deficiency must be addressed prior to final approval:

R645-301-353: The Permittee must establish on all disturbed areas, except water areas and surface areas of roads, a vegetative cover that is in accordance with the approved permit and reclamation plan. Any space within the topsoil storage disturbed area that is not rip-rapped or the surface of a road must be revegetated and held to a 10-year responsibility period.

tmiller

Maps Affected Area Boundary

Analysis:

The amendment does not meet the State of Utah R645 requirements for Affected Area Maps.

The application does not satisfy the Utah Coal Rules because the submitted maps contain information that is contradictory to the currently approved maps on file with the Division, and there is no language offered in the narrative that offers an explanation for the discrepancies. The lines that illustrate the Disturbed Area Boundary are slightly different than maps that have been previously submitted and approved. This error is evident in the following maps:

- Figure C - Post Reclamation Topography (Sheet 2 of 2)
- 500-5 - Post Reclamation Topography (Sheet 1 of 2)
- 500-5 - Post Reclamation Aerial (Sheet 2 of 2)
- Appendix E - Soil Sampling Locations
- 700-4 - Reclamation Hydrology Aerial (Sheet 2 of 2)

Additionally, the hatch marks called out in the Legend that designate Pre-Disturbed Areas in 500-5, Sheet 1 are missing from the map.

Deficiencies Details:

The amendment does not meet the State of Utah R645 requirements for Affected Area Maps. The following deficiency must be addressed prior to final approval:

R645-301-521.141, and -121.200: The Permittee must correct the linework that illustrates the Disturbed Area Boundary on the aforementioned maps. Additionally, the hatch pattern that illustrates the location of the Pre-Disturbed Areas in map 500-5, sheet 1 must be restored.

jeatchel

Maps Reclamation Surface and Subsurface Man Made

Analysis:

The amendment does not meet the State of Utah R645 requirements for Man-Made Reclamation Surface Maps.

The application does not satisfy the Utah Coal Rules defining reclamation surface maps because several maps within the submittal contain roads within the Disturbed Areas that are not explained within the narrative. Near the end of the application, the Permittee has included a suite of maps from Johansen & Tuttle Engineering Inc. that illustrate views of the facilities contained within the Emergency Watershed Protection Project in Rilda Canyon. Several maps contain plan views of the Topsoil Pile Disturbed Area just south of Emery County Road #306. The top portion of the Topsoil Pile is bisected by a "Springs Access Road" that branches off from County Road #306 to the east of the pile. There is no language in the narrative that explains the purpose of the Springs Access Road, and whether the road will eventually require reclamation. The narrative does not clarify whether the Springs Access Road is a Primary road that requires maintenance, or if it was intended to be a temporary or permanent structure. The Springs Access Road is visible on the following maps:

- Sheet No. 5 - North Emery Springs Site Plan
- Sheet No. 20 - Dike and Rip Rap Plan and Profile

Deficiencies Details:

The amendment does not meet the State of Utah R645 requirements for Man-Made Reclamation Surface Maps. The following deficiency must be addressed prior to final approval:

R645-301-521.120 thru -521.123, R645-301-534.100 thru 140: Permittee must give a description of the Springs Access Road that bisects the Topsoil Pile in Rilda Canyon, and indicate whether it is a temporary or permanent structure.

jeatchel