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State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
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Division of Oil, Gas and Mining

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May 3, 2019

Rick Parkins, Manager
Bronco Utah Operations, LLC
P.O. Box 527
Emery, Utah 84522

Subject: Midterm Completion Response, Bronco Utah Operations, LLC, Emery Deep Mine, C/015/0015, Task #5864

Dear Mr. Parkins:

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. Please resubmit the entire application by no later than June 7, 2019.

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

Sincerely,

Steve Christensen
Coal Program Manager

SKC/sqs
cc: John Gefferth
Kit Pappas
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Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0150015
TaskID: 5864
Mine Name: EMERY DEEP MINE
Title: MIDTERM COMPLETION RESPONSE

General Contents

Identification of Interest

Analysis:

The Mining and Reclamation Plan (MRP) meets the State of Utah R645 requirements for Identification of Interests.

The previous technical analysis (Task ID #5670) had identified a deficiency relative to the Identification of Interest information in the approved MRP. On May 22nd, 2018, the Division of Oil, Gas and Mining (the Division) received an amendment for the Hidden Valley Mine (Task ID #5681) that revised the ownership and control information. The amendment identified changes in the control structure for the Hidden Valley Mine property including a new acting chief executive officer (CEO) as well as a new Treasurer/Secretary. The Hidden Valley amendment was granted final approval on June 19th, 2018. As the organizational/ownership structure for Hidden Valley is the same as for the Emery Deep Mine, the Division directed the Permittee to update/revise the Emery Deep MRP with the same information.

In Appendix I-1, Ownership and Control, the Permittee has revised the table that identifies the various officers of Bronco Utah Operations, LLC. End dates were provided for former officers of the company including Daniel R. Baker, Gary Takenaka and David Petty.

Additionally, information was provided for the new officers of Bronco Utah Operations, LLC. Bart Hyita is shown as having assumed the position of Chief Executive Officer/President of Bronco Utah Operations, LLC as of April 17th, 2018. Harold Cunningham is identified as the Treasurer Secretary/Controller. Mr. Cunningham's start date with Bronco Utah Operations, LLC was May 18th, 2018.

The aforementioned revisions were also provided in Appendix I-1 for Bronco Utah Reserves, Inc., Bronco Coal Resources, LLC.

schriste

Violation Information

Analysis:

The MRP meets Violation Information requirements of the State of Utah R645-Coal Mining Rules.

The previous technical analysis (Task ID #5670) had identified a deficiency relative to the Violation Information in the approved MRP. The Division needed the names and start dates of the new officers of Bronco Utah Operations, LLC, Bronco Utah Reserves, Inc. or Bronco Coal Resources, LLC in order to evaluate whether there were any outstanding violations associated with them.

The Permittee provided the names and start dates for both Bart Hyita and Harold Cunningham. Bart Hyita is shown as having assumed the position of Chief Executive Officer/President of Bronco Utah Operations, LLC as of April 17th, 2018. Harold Cunningham is identified as the Treasurer Secretary/Controller. Mr. Cunningham's start date with Bronco Utah Operations, LLC was May 18th, 2018.

Upon entering the aforementioned information in to OSMRE's Application Violator System (AVS), no outstanding violations were found in connection with either Mr. Hyita or Mr. Cunningham.

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Right of Entry

Analysis:

The application meets the State of Utah R645 requirements for Right of Entry.

This information was provided with an amendment dated 2/08/2019 (reviewed as tasks 5859 and 5868) and incorporated into the MRP on 3/5/2019. Surface Ownership plate I-1 is current. Chapter 1 Appendix 1-2 states that the SE1/4SW1/4 of SITLA Lease ML 51745-OBA was relinquished (p. 10). The excluded/relinquished portion of the SITLA lease in Sec 29 is shown on Plate V-5.

pburton

Right of Entry

Analysis:

The MRP meets the State of Utah R645 requirements for Right of Entry.

On page 8 of Chapter 1 of the approved MRP, the Permittee discusses right of entry. The coal mining activity occurs based on surface and/or sub-surface ownership by Bronco Utah Operations, LLC and Bronco Utah Reserves, Inc. or on lease agreements. A detailed description of the documents is provided in Appendix I-2.

Appendix I-2 provides the names and contact information of all private land-owners within the permit and adjacent area.

schriste

Legal Description

Analysis:

The MRP meets the State of Utah R645 requirements for Legal Description and Status of Unsuitability Claims.

The MRP discusses areas unsuitable for mining on page 7a of Chapter I. Areas unsuitable for mining are not located within the permit area. The adjacent area contains one dwelling that is occupied intermittently (located in Section 30, Township 225, R6E) and several public roads (depicted on Plate III). Protection of land surface features is presented in Chapter V of the MRP.

schriste

Permit Application Format and Contents

Analysis:

The application meets the State of Utah R645 requirements for Format and Content.

During the initial mid-term review, a deficiency was identified relative to as-built information following the construction of the Emery No. 2 Mine. R645-301-121.100 requires that the MRP contain current information as required by R645-301. During the field inspection on May 30th, 2018, it was determined that as-built maps must be submitted to the Division to accurately reflect the facilities conditions on the ground. The Permittee submitted as-built information for the Emery No. 2 Mine.

On April 25th, 2019, Division staff conducted a field inspection of the Emery No. 2 mine site. The purpose of the field inspection was to verify the as-built drawings provided by the Permittee. Upon comparing the provided as-built drawings with the conditions observed in the field, there were several areas identified where additional information is required in order for the Division to approve the as-built drawings and a deviation from the previously approved Emery No. 2 designs.

The hydrologic review of the as-built information will be provided in the germane hydrology sections of the R645 rules.

Environmental Resource Information

Historic and Archeological Resource Information

Analysis:

The amendment meets the State of Utah R645-301-411 requirements for historic and archeological resource information. The previous deficiency (from Task #5670) identified a commitment from the mine to conduct annual monitoring of cultural resources that no longer require such monitoring.

Originally, the mine intended to conduct subsidence mining in the Zero Zero North area which contained 5 NRHP-eligible sites (42Em3964, 42Em3965, 42Em3966, 42Em3969 and 42Em3974). Annual monitoring was a condition of approval of the plan and was therefore committed to by the mine with the commitment appearing in Chapter X-A of the confidential section. However, the mine later changed course and did not actually go through with subsidence mining and that area of the mine has since been sealed. Without the threat of subsidence, the requirement to monitor the 5 sites is unnecessary and has been removed from the MRP.

tmiller

Soils Resource Information

Analysis:

The application does not meet the State of Utah R645 requirements for Soil Survey, because the location of the 4th East portal soil survey is not mentioned in the Chap VII Table of contents or in Chap VII, p. 80.

Chap VII, p.80 provides a reference to the Emery 2 box cut soil survey information found in App. VII-5 and App VII-6. The 4th East portal soil survey is not mentioned in this listing. It is found in Appendix VII-3.

Prior to disturbing new area, soils will be surveyed and samples analyzed according to the field parameters outlined in Table 2 and the laboratory parameters outlined in Table 3 of The Division's 2008 Guidelines for Management of Topsoil and Overburden (Chap VII.C.4 (p. 83)).

Deficiencies Details:

The application does not meet the R645-301-121.200, clear and concise requirements. The following deficiency must be addressed prior to final approval:

R645-301-121.200,

Update the MRP Chap VII table of contents and include a reference to the 4th East portal soil survey on pg. 80 of Chap VII.

pburton

Operation Plan

Topsoil and Subsoil

Analysis:

The application does not meet the requirements of R645-301-230 Operation Plan, because the as-built volumes of stockpiled topsoil and subsoil could not be found in the narrative.

Chap II, page 17 lists the 4th East portal stockpile volume as 7,900 CY. No other topsoil or subsoil stockpiles are listed in Chap II Part A Structures and Facilities.

Soil stockpiles near the main mine facilities are shown on Plate II-1. Stockpiles at the 4th East portal are shown on Plate IV-3b. As-built volumes some stockpiles are included in the bonding calculations Earthwork costs (App IV-9-B) as follows:

- 4th East Portal topsoil stockpile = 10,440 CY. Chap 2, p. 17 should be updated with this as-built information. i.e. 10,400 CY vs 7,900 CY).
- 4th East portal in-place topsoil (beneath excavated material) = the area of storage as stated in Table IV-1 on Chap IV, p. 8b as 108,900 sq ft or 2.5 acres. Estimated in Earthwork calculations as 12,100 CY (App IV-9-B, p. 17 of 21).
- Topsoil pile T2 (Emery 2 Boxcut and main facilities topsoil) = 18,500 CY entire permit subsoil topsoil. Chap II, pg 17i should be updated with this volume.

Topsoil storage is generally described in Chap VII.C.6. Topsoil stockpile volumes or dimensions could not be found in the narrative.

Deficiencies Details:

The application does not meet the R645-301-121.200, clear and concise requirements. The following deficiency must be addressed prior to final approval:

R645-301-121.200 and R645-301-231.400,

The MRP must be updated with the a narrative describing all topsoil and subsoil stockpile volumes, for those stockpiles shown on Plate II-1.

The 4th East portal volume presented in Chap II, p. 17 must be equivalent to that described in the Earthwork bonding sheet 17 of 21 in App IV-9-B.

The boxcut topsoil/subsoil stockpile volume should be equivalent to that described in Earthwork bonding sheet 18 of 21 in App IV-9-B (which is 18,500 CY).

pburton

Road System Other Transportation Facilities

Analysis:

The application does not meet the R645 requirements for Road Systems and Other Transportation Facilities.

Per the approval of the Emery No. 2 Mine (Task #5362), a disturbed drainage ditch (DD-5) was to be constructed to convey storm water runoff generated from the fan/water tank pad area located above the box cut down to sediment pond 3. The recently submitted as-built drawings do not depict a DD-5 on Plate VI-10E, Surface Drainage Control Map. The Permittee must revise Plate VI-10E to depict disturbed drainage ditch DD-5.

Deficiencies Details:

The application does not meet the R645 requirements for Road Systems and Other Transportation Facilities. The following deficiency must be addressed prior to final approval:

R645-301-731, -740, -742.400: The Permittee must revise Plate VI-10E to depict disturbed drainage ditch DD-5.

schriste

Spoil Waste Coal Mine Waste

Analysis:

The application does not meet the requirements of R645-301-121.100, current information, because Chap II, p. 17 and 17i require an update with the as-built information. Chap IV requires an update to the Table of contents to locate the 4th East portal as-builts, including Figure IV-15.

The as-built reports 108,800 CY of excess box cut material is stored at the waste disposal site (Chap III, p. 15g). Chap

II, p. 17i mis- states the volume of waste stored at the box cut site .Figure 1 in Chap IV.C4 should also be updated accordingly. (Figure 1 is currently found in the MRP Chap IV e-page 149).

Excess boxcut materials have been graded. They will be seeded, if necessary (cover letter Task 5864 2202019), in accordance with Section VIII.C.6. and Chap II , p. 17, to meet the requirements of R645-301-234.230, protection of stockpiled materials from erosion.

The volume of excavated material at the 4th E portal is stated in the Earthwork costs as 113,711 CY (App IV-9-B, p. 17 of 21). However, Chap II p. 17 states the volume of the excavated material stockpile at the 4th E portal as 128,000 CY. Chap II p. 17 should reflect the Earthwork cost volume which is based on the as-built. The location of the 4th East portal as-built volumes could not be found. The 4th East portal as built should be included in the Chap IV table of contents.

If acid/toxic forming material is encountered, it will be disposed of within 30 days at the waste rock site (Chap IV-A, pg 6).

Deficiencies Details:

The application does not meet the R645-301-121.200, clear and concise requirements. The following deficiency must be addressed prior to final approval:

R645-301-121.200,

Update page 17 4th E portal excavated material volume and page 17i boxcut excess volume to reconcile with the as-built volumes that are reflected in the App. IV-9-B Earthwork bond costs.

Update Chap IV.C4 Figure 1 to illustrate the 108,800 CY stockpiled at the waste rock site.

Update Chap IV table of contents to locate the 4th East portal as-builts and Figure IV-15, which could not be found.

pburton

Hydrologic Diversion General

Analysis:

The MRP does not meet the State of Utah R645 requirements for Diversions.

As part of the mid-term review the Division evaluated the applicable portions of the permit to ensure that the MRP contains commitments for utilizing the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flow outside of the permit area. A field inspection was performed on May 30th, 2018 and again on April 25th, 2019 to verify the submitted as-built drawings. The storm water runoff system was inspected (culverts, diversions, sediment ponds etc.) during both inspections.

The purpose of the field inspection conducted on April 25th, 2019 was to verify the as-built drawings provided by the Permittee. Upon comparing the provided as-built drawings with the conditions observed in the field, there were several areas identified where additional information is required in order for the Division to approve the as-built drawings and a deviation from the previously approved Emery No. 2 designs.

All diversions are depicted on Surface Drainage Control Maps Plates VI-10, VI-10A, VI-10B, VI-10C, VI-10D and VI-10E. Table VI-18 provides a summary of the operational diversion ditches and culverts at the mine site. The table provides design criteria utilized in the sizing of the ditches including: bottom width, side slopes, design flow depth and the design storm event. Detailed design calculations and drawings are presented in Appendix VI-6 and VI-21 of the MRP. The Permittee must revise Table VI-18, Summary of Operational Diversion Ditches and Culverts. Based on the observations by Division on April 25th, 2019, there are features identified in Table VI-18 that were not constructed or are now labeled differently (e.g. undisturbed berm UB-3).

Additional information is required for the inlet to disturbed culvert DC-1. The previously approved design for the inlet to DC-1 (Task #5362) identified a a flared end detail on Plate VI-11B, Emery 2 Drainage Details. Upon inspecting the as-built condition of the inlet to DC-1, a flared end detail was not constructed; rather an at-grade catch basin structure was installed. The Permittee must provide additional information for the inlet structure to disturbed culvert DC-1. The design

detail for the catch basin inlet structure must be provided on Plate VI-11B. Plate VI-11B must clearly identify that the catch-basin structure applies to the inlet of DC-1.

The previously approved drainage design for the Emery No. 2 facility provided a drawing for a flared end culvert detail on Plate VI-11B. The flared end culvert detail has been removed from the recently submitted as-built information. The Permittee must provide the flared end culvert detail (as previously approved per Task #5362) on Plate VI-11B and call out on the plate what culverts this design detail applies to. During the field inspection on April 25th, 2019, the flared end culvert was observed in several locations. As such, it must be provided in the MRP and clearly identify the diversions it applies to.

The previously approved drainage design for the Emery No. 2 facility provided a drawing detail for the undisturbed berms located above the box cut (i.e. UB-1, UB-2 and UB-3). Plate VI-11B depicted a riprap detail for all three undisturbed berms. A D50 of 3" was to be constructed for UB-1 and UB-2 with a D50 of 8" for UB-3. The previously approved information for the undisturbed berms indicated that the riprap was to provide additional flood protection by preventing the overlying undisturbed drainage from flowing into the box cut. During the field inspection on April 25th, 2019, the undisturbed berms were found not to be riprapped as previously approved. The Permittee must revise Appendix VI-21, Emery 2 Surface Facility As-Built Hydrology Design Report and provide a justification/narrative as to why the undisturbed berms (UB-1 and UB-2) were not riprapped as previously designed/approved for additional flood protection.

During the field inspection, the outlet to undisturbed culvert UC-2 was observed. Per the previously approved drainage design (Task #5362), the outlet to UC-2 was to have a flared end detail constructed. A flared end details is not on the outlet to UC-2. The outlet of UC-2 terminates directly adjacent to Christiansen Wash. Christiansen Wash is heavily armored from natural deposition of large boulders. As such, the potential for excessive erosion or gullyng from the discharge conveyed to Christiansen Wash from UC-2 is minimal.

Deficiencies Details:

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

R645-301-731, -740 and -742.400: The Permittee must revise Table VI-18, Summary of Operational Diversion Ditches and Culverts. Based on the observations by Division on April 25th, 2019, there are features identified in Table VI-18 that were not constructed or are now labeled differently (e.g. undisturbed berm UB-3).

R645-301-731, -740 and -742.400: The Permittee must provide additional information for the inlet structure to disturbed culvert DC-1. The design detail for the catch basin inlet structure must be provided on Plate VI-11B. Plate VI-11B must clearly identify that the catch-basin structure applies to the inlet of DC-1.

R645-301-731, -740 and -742.400: The Permittee must provide the flared end culvert detail (as previously approved per Task #5362) on Plate VI-11B and call out on the plate what culverts this design detail applies to. During the field inspection on April 25th, 2019, the flared end culvert was observed in several locations. As such, it must be provided in the MRP and clearly identify the diversions it applies to.

R645-301-731, -740 and -742.400: The Permittee must revise Appendix VI-21, Emery 2 Surface Facility As-Built Hydrology Design Report and provide a justification/narrative as to why the undisturbed berms (UB-1 and UB-2) were not riprapped as previously designed/approved for additional flood protection.

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Hydrologic Impoundments

Analysis:

The MRP does not meet the State of Utah R645 requirements for Impoundments.

During the field inspection on April 25th, 2019, sediment pond 3 was observed. The previously approved design for sediment pond 3 (as shown on Plate VI-15B, Pond 3 Modifications) depicted a riprap detail for both inlets. The recently

submitted as-built drawing and accompanying Plate VI-15B did not show a riprap detail for the two inlets. The Permittee must revise Plate 15-B to show the riprap detail for both inlets to sediment pond 3.

Additionally, the previously approved design included a sediment marker installed in sediment pond 3. The submitted as-built drawing does not show the sediment marker. The Permittee must revise Plate 15-B to show the installed sediment marker and provide sufficient detail as to how the sediment marker delineates the 60% accumulated sediment clean out level.

The revised Appendix VI-21 discusses the utilization of a "sediment basin" to control the storm water generated from the 1.25 acres of disturbed area in the area of the Fan/Water tank pad area located above the box cut. The sediment basin is described as a 3'foot earthen berm located along the northeast side of the pad. The appendix further describes the sediment basin as being designed to safely detain the runoff generated from a 10-year, 24-hour storm event. The Permittee must provide additional information for the impoundment/sediment basin located on the fan/water tank pad above the box-cut. The impoundment must be clearly depicted on Plate VI-10E, Surface Drainage Control Map. The design calculations for the impoundment must be provided in Appendix VI-21. Additionally, detailed design drawings of the impoundment must also be provided for incorporation into the MRP.

Deficiencies Details:

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

R645-301-731, -740, -743: The Permittee must revise Plate 15-B to show the riprap detail for both inlets to sediment pond 3.

R645-301-731, -740, -743: The Permittee must revise Plate 15-B to show the installed sediment marker and provide sufficient detail as to how the sediment marker delineates the 60% accumulated sediment clean out level.

R645-301-731, -740, -743: The Permittee must provide additional information for the impoundment/sediment basin located on the fan/water tank pad above the box-cut. The impoundment must be clearly depicted on Plate VI-10E, Surface Drainage Control Map. The design calculations for the impoundment must be provided in Appendix VI-21. Additionally, detailed design drawings of the impoundment must also be provided for incorporation into the MRP.

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Reclamation Plan

Topsoil and Subsoil

Analysis:

The MRP meets the requirements of the Utah Coal Rules, because as-built excavation volumes are provided in Chap IV and Chap III.

There is 108,800 CY of excess cut material is stored at the waste disposal site for use in final reclamation (Chap III p. 15f and Chap IV page 8e). The site has the capacity for an additional 12,900 CY (App. IV-9-B, p.3 of 12).

The MRP Chap III, p. 15g states 149,000 CY is required for reclamation of the 6.25 acre* box cut. Earthwork bond costs for Emery 2 boxcut delineate that 84,900 CY will be relocated within the boxcut, and 65,000 will be will be trucked from the waste rock site to fill the shaft and boxcut (App. IV-9-B, p. 18 of 21). Chap III p. 15g further states that 3,630 CY will be trucked from the waste rock site to reclaim the switchback road. The volume remaining at the waste rock site at final reclamation will be approximately 41,070 CY (Chap III p. 15g). The site has an additional 12,900 CY capacity. Therefore, Appendix IV-9-B p. 3 of 21 describes the backfilling and grading of 53,970 CY in the portal area.

Appendix VII-2 describes the topsoil substitution plan for the underground development waste disposal site. The plan for

segregating top, middle and lower sections of the pile based on previous sampling is no longer valid, since the previous 31,000 CY of waste is now buried and mixed with the excess boxcut material. However, the plan describes re-sampling the site for topsoil substitute quality, quantity and cover material (App VII-2, p. 2). Plate IV-4 shows the final contours of the permanent underground disposal site.

The box cut reclamation plan is found on pages 15d , 15e, and 21a of Chap III. Topsoil will be replaced on 8.6 acres which includes the fan pad and the switchback road.

The volume of waste to be replaced in the 4th E portal is stated in the Earthwork costs as 113,711 CY (App IV-9-B, p. 17 of 21). Reclamation of the 4th E portal is described in App IV-9-D, Worksheet 1.

The soil redistribution plan for the main facilities is described in Appendix VII-1 and on page 85-86 of Chap VII-C-5. This reclamation plan is under study as noted in Chap III, p. 4a and 4b.

The Plate VII-1 Soil Map and Plate III-9 Permit Boundaries and Bonding Map show the as-built Emery 2 disturbed area. Table III-2 states the Emery 2 as-built disturbed area is 10.1 acres and the total disturbed area is 85.97 acres (Chap III, p. 2).

*The 6.25 acre area (272,081 sq ft) of the boxcut is stated in the Volume Summary of the Boxcut Excavation Table found in both Chap III p. 15f and Chap IV page 8e.

pburton

Bonding Determination of Amount

Analysis:

The application meets the State of Utah R645 requirements for Determination of Bonding Amount.

R645-301-830: A previous deficiency (Task# 5670) required that the Permittee update all of the direct costs associated with the reclamation bond and escalate to 2023 dollars. One of the most significant items that needed to be addressed was the lack of overhead and profit (O&P) costs in all of the direct costs. The reclamation bond on file with The Division amounts to \$4,596,000 and applying O&P to all of the direct costs should have resulted in a modest increase in the overall amount of the reclamation bond.

The bond estimate in the midterm completion response reveals that O&P has been applied to all direct costs where appropriate, and all costs escalated by 1.78% to 2023 dollars. Despite applying O&P and escalation to the reclamation bond, the current reclamation cost estimate remains the same at \$4,596,000. This is due to several earthwork errors that were discovered during a recent bond audit completed by Barr Engineering. The old reclamation bond erroneously claimed a quantity of 100,911 cubic yards of topsoil at the 4th East Portal, when that volume should have been 10,440 cubic yards. Additionally, the old reclamation bond accounted for over 154,000 cubic yards of coal mine waste when those volumes no longer exist on site. In a meeting between John Gefferth and The Division on January 10, 2019, it was reiterated that the coal mine waste in question had been removed and sent to Covol Engineered Fuels during the latter half of 2008. The removal of coal mine waste volumes to COVOL Engineered Fuels is also confirmed in a memo to Daron Haddock dated October 30, 2008 (Task ID# 3020). In a follow up visit to the site by Division staff on January 30, 2019, it was confirmed that the coal mine waste volumes in question no longer reside on site. Although the coal mine waste volumes had been removed from the mine site in 2008, the earthwork calculations that accounted for these volumes in the reclamation bond were not amended until the date of this midterm permit review

jeatchel