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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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February 26, 2019

Bart Hyita, President
Bronco Utah Operations, LLC
P.O. Box 527
Emery, Utah 84522

Subject: ROW Revision, Bronco Utah Operations, LLC, Emery Deep Mine, C/015/0015, Task #5859

Dear Mr. Hyita:

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.

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

Sincerely,

Steve Christensen
Permit Supervisor

SKC/sqs
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Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0150015
TaskID: 5859
Mine Name: EMERY DEEP MINE
Title: ROW REVISION

Summary

On February 8th, 2019, the Division of Oil, Gas and Mining (the Division) received an amendment to the Emery Deep Mining and Reclamation Plan (MRP) from Bronco Utah Operations, LLC (the Permittee). The amendment proposes the addition of a 120 acre tract of Federal coal right of way (ROW). The project location is Township 23S, R 6E, Section 5, Lots 1-3.

As part of the Federal approval for the proposed mining in this block of coal, the Bureau of Land Management completed an Environmental Assessment (EA). The EA was prepared to analyze the potential environmental impacts of the proposed underground ROW.

Access to the Federal coal will allow the Permittee to access fee and State owned coal to the west of the ROW. The State coal is administered by the School and Institutional Trust Lands Administration (SITLA). The SITLA coal is located within lease ML-51745-OBA.

schriste

General Contents

Right of Entry

Analysis:

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

The 120 acre section of Federal coal that encompasses the right of way was approved by the Bureau of Land Management (BLM) on February 6th, 2019. As part of the Federal approval for the proposed mining in this block of coal, the Bureau of Land Management completed an Environmental Assessment (EA). The EA was prepared to analyze the potential environmental impacts of the proposed underground ROW.

The Decision of Record (DR) and Finding of No Significant Impact were approved on that date (UT-G-020-2018-0051-EA). A thorough description of BLM's approval process for the right of way can be found here:

<https://eplanning.blm.gov/epl-front-office/eplanning/projectSummary.do?methodName=renderDefaultProjectSummary&projectId=116574>

The Permittee has updated Appendix I-2 where the ownership information (surface and mineral) are provided. Additionally, the adjacent area legal description has been updated in Section IV.A.1 Underground Mine Plan on page 1

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. There is no planned surface disturbance or subsidence associated with this undertaking. As such, there is no potential to affect historic properties in this area. As part of the Environmental Assessment used in issuing this right of way, the BLM concluded that “no impact to significant cultural resources is expected.” DOGM concurs with this finding and will not seek SHPO concurrence under the 2014 programmatic agreement between the BLM and Utah SHPO, Stipulation I (p. 4), which states in part that “if an undertaking is a type of activity that does not have the potential to cause effects on historic properties ... the district or field office manager has no further obligations under section 106.” Because the BLM has determined that no potential effect to historic properties exists with this proposal, there does not need to be further concurrence from the Utah SHPO.

tmiller

Fish and Wildlife Resource Information

Analysis:

The amendment meets the State of Utah R645-301-322 requirements for fish and wildlife resource information. A USFWS species list pulled from the USFWS IPaC website on 2/21/19 for the project area indicates the following threatened or endangered birds may exist in the project area: California condor (E), Mexican spotted owl (T), southwestern willow flycatcher (E), and yellow-billed cuckoo (T). There is also the possibility for Jones cycladenia (T), last chance townsendia (T), San Rafael cactus (E), and Wright fishhook cactus (E) to exist in the area. California condors are rarely observed as far north as the project area and the area itself does not contain suitable habitat for condor feeding, perching, or mating. The designated critical habitats for the Mexican spotted owl, southwestern willow flycatcher, and yellow-billed cuckoo are all more than 30 miles away from the project area. Other suitable habitat for these species is not present at the project location. These factors, along with the nature of the proposal—no surface disturbance is being permitted and no subsidence is planned—it is determined that no effect to threatened or endangered wildlife species will result from the proposed undertaking.

The BLM created an Environmental Assessment for this project and concluded that it is unlikely that threatened, endangered, proposed, or candidate plant species would be affected due to the lack of surface disturbance and subsidence. The same conclusion was made for migratory birds, general wildlife, and BLM sensitive wildlife. DOGM concurs with these assessments. In the future, should the permittee seek to perform mining that could result in subsidence in this area, further evaluation of effects to plants and wildlife would need to be performed prior to approval of such mining.

tmiller

Hydro Baseline Information

Analysis:

The amendment does not meet the State of Utah R645 requirements for Baseline Hydrologic Information.

The proposed Federal ROW is located within the currently approved area of hydrologic evaluation as shown on Plate VI-4, Ground Water Monitoring Well and Surface Water Monitoring Site Location Map. As a result, the historic and current hydrologic monitoring data can be applied to characterizing the ground and surface water systems both within and adjacent to the proposed mine expansion.

The Permittee has updated Plate VI-7, Upper Ferron Sandstone Potentiometric Surface 2018 and Plate VI-8, Lower Ferron Sandstone Potentiometric Surface 2018. The two plates are currently found in the approved MRP; however, the Permittee has updated them from 2006 to 2018 by utilizing water monitoring data collected during that 12 year span. Additionally, Plate VI-6, Anticipated Initial Depth of Groundwater Over Bottom of I-Seam has been updated.

Upon review of Plate VI-6, Ground Water Monitoring Well and Surface Water Monitoring Site Location map, two

ephemeral washes are found within the Federal ROW. The ephemeral wash located on the eastern portion of the Federal ROW has been monitored at surface water monitoring sites SWMS-11 and SWMS-12 since the approval of the Emery No. 2 Mine (Task #5362, final approval March 9th, 2017). Additionally, the ephemeral wash located in the eastern section of the ROW was characterized by the Permittee in Appendix VI-22, Baseline Investigation of Unnamed Ephemeral Wash Affected by Emery 2 Surface Facilities (Task #5362).

Upon review of the application, it does not appear that any characterization and/or discussion have been provided relative to the ephemeral wash located on the west side of the proposed ROW. R645-301-220 requires the Permittee to characterize baseline surface water conditions in areas that could potentially be impacted by coal mining and reclamation operations.

Deficiencies Details:

The amendment does not meet the State of Utah R645 rules for Hydrologic Baseline Information. The following deficiency must be addressed prior to final approval:

R645-301-724.220: The Permittee must provide adequate baseline information to characterize the drainage depicted on the west side of the proposed Federal Right-of-Way (ROW).

schriste

Probable Hydrologic Consequences Determination

Analysis:

The amendment does not meet the State of Utah R645 rules for Probable Hydrologic Consequences Determination.

In order for the Division to assess the probable hydrologic consequences of the proposed ROW expansion, the Permittee must provide the requisite baseline information for the unidentified drainage located in the western portion of the proposed Federal Right of Way (ROW). Once the information is provided, the Division will be able to determine whether the Probable Hydrologic Consequences (PHC) section of the approved Mining and Reclamation Plan (MRP) is adequate.

Deficiencies Details:

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

R645-301-728: The Permittee must provide the requisite baseline information for the unidentified drainage located in the western portion of the proposed Federal Right of Way (ROW). Once the information is provided, the Division will be able to determine whether the Probable Hydrologic Consequences (PHC) section of the approved Mining and Reclamation Plan (MRP) is adequate.

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Maps Monitoring and Sampling Locations

Analysis:

The application meets the State of Utah R645 requirements for Monitoring and Sampling Location Maps.

Plate VI-4, Ground Water Monitoring Well and Surface Water Monitoring Site Location Map depicts the locations of the ground and surface water monitoring sites. It has been updated to show the two additional ground water monitoring sites (e.g. USGS 2-1 and T-1).

schriste

Maps Subsurface Water Resources

Analysis:

The application meets the State of Utah R645 requirements for Maps of Subsurface Water Resources.

The Permittee has updated Plate VI-7, Upper Ferron Sandstone Potentiometric Surface 2018 and Plate VI-8, Lower Ferron Sandstone Potentiometric Surface 2018). The two plates are currently found in the approved MRP; however, the Permittee has updated them from 2006 to 2018 by utilizing water monitoring data collected during that 12 year span. Additionally, Plate VI-6, Anticipated Initial Depth of Groundwater Over Bottom of I-Seam has been updated.

schriste

Operation Plan

Mining Operations and Facilities

Analysis:

The application meets the State of Utah R645 requirements for Mining Operations and Facilities.

The application satisfies the minimum requirements of R645-301-511 and -521 because narrative on pages 18 and 19 describe the mining methods that will be employed, and a map illustrating the extent of mining is provided on Plate IV-2, UG Operations Plan. Mining will take place within a recently approved Bureau of Land Management (BLM) Right of Way in an area adjacent to the Permit area. The BLM approved this Right of Way (DOI-BLM-UT-G020 2018-0051-EA) on February 6, 2019, and only first mining will be completed. Continuous mining machines will develop 6-entry mains including panel necks to provide mining access at a later date. The mining entries are planned to be 20 feet wide, and the pillar dimensions will be 60 feet x 125 feet. Aside from the 6-entry mains, no other mining is planned within the Right of Way at this time.

jeatchel

Subsidence Control Plan Subsidence

Analysis:

The application meets the State of Utah R645 requirements for Subsidence Control Plans.

R645-301-525.313: Subsidence is not expected nor authorized within the Right of Way at this time. Page 19 of the application states that since all proposed mining within the Right of Way is planned to be room-and-pillar or first mining only, no subsidence is anticipated. Permanent pillars will be left in place to ensure future mining access. Narrative throughout pages 225 - 229 reiterate that the BLM granted approval for mining within the Right of Way based on the pretext that no subsidence would occur. At some future time, it is possible that second mining or pillar-pulling mining practices may be employed which would result in subsidence. Once that occurs a subsidence control plan would need to be formally addressed, including a pre-subsidence survey, installation of surveyed monitoring points, and a subsidence point monitoring protocol, as documented in Chapter V of the MRP. Plate V-5 Subsidence Monitoring Points and Buffer Zones illustrates the entire mine plan extents and shows the location of the proposed Mains through the adjacent area Right of Way. No subsidence monitoring points are located within the Right of Way because subsidence is not planned nor authorized.

jeatchel

Hydrologic Ground Water Monitoring

Analysis:

The application does not meet the State of Utah R645 requirements for Groundwater Monitoring.

Table VI-17 has been revised to show the addition of two water monitoring wells. Monitoring wells T1 and USGS 2-1 have been added to the groundwater monitoring plan. T1 has been identified as a water quality data collection well that will be sampled quarterly. USGS 2-1 is a monitoring well that has been proposed for quarterly water level monitoring only.

Monitoring well USGS 2-1 is completed within the lower Ferron Sandstone. The Permittee indicated that the well was completed in 1978. The data collected from this well, in addition to monitoring wells AA(L), Kemmerer and R1 are sufficient to identify potential impacts to ground water conditions in the lower Ferron Sandstone.

Monitoring well AA is located directly north of the proposed Federal ROW (approximately ¼ mile). Monitoring well AA is a historic monitoring well that has been monitored since 1980. The well has four completions in the following geologic units: Bluegate Shale (AA-B), upper Ferron Sandstone (A-U), middle Ferron Sandstone (A-M) and lower Ferron Sandstone (AA-L).

Monitoring well T1 has two completions: upper Ferron Sandstone (T1-U) and T1-B (Bluegate Shale). Monitoring of T1-U was discontinued in 2016. The Permittee has rehabilitated this completion and is proposing the quarterly monitoring of the well for the approved water quality parameters shown in Table VI-17.

Per the requirements of R654-301-731.210, -731.220 the Permittee must revise Table VI-17, Emery Mine Hydrologic Monitoring Program. Please add T1-B to the table. T1-B is currently monitored quarterly for water quality, but was inadvertently removed the table with the removal of T1-U. Additionally, call out T1-U separately so as to clearly identify the two T1 wells. Similarly, please break out the "Emery Town" wells as Emery Town Well 1 and Emery Town Well 2. Emery Town Well 1 is the water quality well and Emery Town Well 2 is a water level only well.

Deficiencies Details:

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

R654-301-731.210, -731.220: The Permittee must revise Table VI-17, Emery Mine Hydrologic Monitoring Program. Please add T1-B to the table. T1-B is currently monitored quarterly for water quality, but was inadvertently removed from Table VI-17 with the removal of T1-U. Additionally, call out T1-U separately so as to clearly identify the two T1 wells. Similarly, please break out the "Emery Town" wells as Emery Town Well 1 and Emery Town Well 2. Emery Town Well 1 is the water quality well and Emery Town Well 2 is a water level only well.

schriste

Hydro Surface Water Monitoring

Analysis:

The application does not meet the State of Utah R645 requirements for Surface Water Monitoring.

Upon review of the surface water resources information, a drainage was identified in the western portion of the proposed Federal ROW. The application did not provide information for this drainage, therefore the Division is unable to determine whether or not additional surface water monitoring is required at this time.

The Permittee must provide baseline information for the unidentified drainage located in the western portion of the proposed Federal Right of Way (ROW) in order for the Division to assess whether or not additional surface water monitoring points need to be established. Once the information is provided, the Division will be able to determine whether or not additional surface water monitoring is required for the proposed mining in the Federal ROW.

Deficiencies Details:

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

R645-301-731.220,- 731.221: The Permittee must provide baseline information for the unidentified drainage located in the western portion of the proposed Federal Right of Way (ROW) in order for the Division to assess whether or not additional surface water monitoring points need to be established. Once the information is provided, the Division will be able to determine whether or not additional surface water monitoring is required for the proposed mining in the Federal ROW.

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Hydrologic Stream Buffer Zones

Analysis:

The application meets the State of Utah R645 requirements for Stream Buffer Zones.

No surface disturbance is proposed with the addition of the Federal ROW. As a result, the State of Utah R645 requirements for Stream Buffer Zone protection are not applicable.

schriste

Maps Monitoring and Sampling Locations

Analysis:

The application meets the State of Utah R645 requirements for Monitoring and Sampling Location Maps.

Plate VI-4, Ground Water Monitoring Well and Surface Water Monitoring Site Location Map has been revised to show the two additional ground water monitoring wells that have been added (i.e. USGS 2-1 and T1).

schriste

Reclamation Plan

Hydrological Information Reclamation Plan

Analysis:

The amendment meets the State of Utah R645 requirements for Hydrologic Reclamation Plan.

As the proposed mining activity in the 2nd left panel does not call for any additional surface disturbance, a revision to the Hydrologic Reclamation Plan is not required.

schriste

CHIA

CHIA

Analysis:

The application meets the State of Utah R645 requirements for Cumulative Hydrologic Impact Assessment.

The proposed ROW is located within the existing cumulative impact area (CIA). Plate 4, Hydrologic Map of the Lower Quitcupah Creek Watershed CHIA depicts the CIA. The proposed ROW area is within the boundaries of the established CIA.

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