



**State of Utah**  
 DEPARTMENT OF NATURAL RESOURCES  
 MICHAEL R. STYLER  
*Executive Director*  
 Division of Oil, Gas and Mining  
 JOHN R. BAZA  
*Division Director*

## Technical Analysis and Findings

### Utah Coal Regulatory Program

May 19, 2017

**PID:** C0250005  
**TaskID:** 5424  
**Mine Name:** COAL HOLLOW  
**Title:** 2016 ANNUAL REPORT AMENDMENT

### Summary

Alton Coal Development, LLC submitted Appendix 3-6 (Greater Sage-grouse Population Monitoring and Habitat Improvement Report, 2016) and Appendix 4-7 (Archaeological Testing & Historic Road Reconnaissance) to be added to the existing MRP. This technical analysis is on those reports.

*Deficiencies Details:*

Ireinhart

### Environmental Resource Information

#### General

*Analysis:*

The amendment meets the State of Utah R645 requirements for adhering to the Mining and Reclamation Plan (R645-300-143) with emphasis on the Fish and Wildlife Protection and Enhancement Plan (R645-301-333)

The amendment consists of the 2016 Progress Report for Greater Sage-grouse Population Monitoring and Habitat Improvement. Although the report was incorporated into the MRP on 2/3/17 (Task 5356), the Permittee has updated the report to include the findings from the noise study. The Permittee requests this amendment replace the older version in the MRP Vol. 2, Ch.3, Appendix 3-6. The report meets several requirements identified in Appendix 3-8 Greater Sage-grouse Management Plan.

Ireinhart

### Historic and Archeological Resource Information

*Analysis:*

The amendment meets the State of Utah R645-301-411.140 requirements for cultural and historic resources information.

The cultural resources report (U16-HO-0136p(e)) discusses the results of the Tier I archaeological site testing and historic road reconnaissance within the Alton Coal North Private Lease Area. Mitigation work was conducted pursuant to the Archaeological Monitoring & Historic Properties Treatment Plan (HPTP). Tier I work was conducted under Utah Project

number U16-HO-0136p(e) and supervised by Bighorn archaeologist Steven Hall between 22 February and 10 March 2016. All fieldwork activities were completed under the direction of Dale R. Gourley.

The mitigation was guided by a research design established in the HPTP and focused on the collection of data that could contribute additional information on aboriginal occupation and adaptation to past environments within the region. The data presented in the report covers the fieldwork involved with the Tier I mitigation work on sites 42KA3077 and 42KA3097, and includes the project research design, descriptions of site testing results, and artifact analysis. Results of the historic road reconnaissance are also presented. Preliminary results of the mitigation work have also been prepared and submitted recommending no further mitigation work beyond the Tier I data recovery efforts (Gourley 2016b, 2017).

On April 19, 2017, The Division consulted with The Utah State Historic Preservation Office and recommended that based on the results from the Tier I testing, no further testing be required on sites 42KA3077 and 42KA3097. On May 16, 2017, the SHPO provided written concurrence with the recommendation. The Permittee shall conduct on-site monitoring during excavation of the top soil at the two eligible locations in an effort to collect any additional data during disturbing activities. The Permittee will also present the findings of the mitigation project to the public.

ireinhart

## Operation Plan

### Topsoil and Subsoil

#### *Analysis:*

The Figure 1 and accompanying soils analysis do not meet the requirements of R645-301-250, soil handling performance standards, because the phase 1 bond release areas 16TS-7, 16TS-8, 16TS-11, 16TS-12 (all immediately South of Pit 10/UG mine) and 16TS14 (immediately West of the underground mine) were omitted from Figure 1. The five corresponding samples were omitted from the annual report amendment.

The topsoil from locations TS -1 through TS-6, 16, TS-9 and TS-10 and TS-13 were analyzed for pH, and plant macronutrients: nitrogen, phosphorus and potassium. Figure 1 shows the location represented by each composite sample. The nine samples taken at locations shown in on Figure 1 were taken in August 2016. They are 16-TS-1 through 16TS-10 and 16TS-13.

The pH values and phosphorus values resemble the original soil values taken at soil sample location 38 prior to disturbance (refer to Soil Map 2-1 and Attachment 2-1 for original sample locations and analysis). The replaced topsoil has more available potassium and nitrogen than the undisturbed soil. Texture and SAR analysis are not required analysis, unless there is evidence of surface accumulation of salt (MRP, Sec. 232.500, p. 2-27).

Figure 1 calls out the remaining acreage in the South Lease requiring topsoil. The total acreage remaining to receive topsoil is 178.3 acres which includes the borrow area, the interim reclamation area, pond 3, and the facilities area. The MRP Figure 1, dated 2016, calls out 211 acres remaining to be topsoiled. Please provide a narrative explanation for the reduction in acres requiring topsoil.

#### *Deficiencies Details:*

The application does not meet the soil handling performance standards. Prior to approval, provide the following in accordance with

R654-301-231.300, Illustrate bond release areas 16TS-7, 16TS-8, 16TS-11, 16TS-12 (all immediately South of Pit 10/UG mine) and 16TS14 (immediately West of the underground mine) on Figure 1 and provide the five corresponding composite sample analyses for those areas topsoiled in 2016.

R645-301-121.200, Figure 1 calls out the remaining acreage in the South Lease requiring topsoil. The total acreage remaining to receive topsoil is 178.3 acres which includes the borrow area, the interim reclamation area, pond 3, and the facilities area. The MRP Figure 1, dated 2016, calls out 211 acres remaining to be topsoiled. Please provide a narrative explanation for the reduction in acres requiring topsoil.

pburton

## Reclamation Plan

## General Requirements

### Analysis:

The information provided meets the requirements of R645-301-542.100 to provide a detailed timetable for the completion of each major step in the reclamation plan, because Reclamation Sequence Drawings 5-38 (South Lease) and 5-76A & B (North Lease), all dated 3/31/2017, show the annual progression of reclamation.

In the South Lease, Dwg 5-38 shows a total of 191.7 acres have been mined. At the end of 2016, 71.9 additional acres had been reclaimed. This is 85% of the projected reclamation shown for 2016 on Dwg 5-38, dated August 1, 2016. The total acreage reclaimed at the site to date is 175 acres.

In the North Lease, Dwg 5-76A & B show 17.9 acres reclaimed in 2016, of which 16.2 acres were topsoiled and seeded. Total acres mined and backfilled in the North Lease is not included on these plates.

pburton

## Topsoil and Subsoil

### Analysis:

Drawings 5-38 Reclamation Sequence and Drawing 5-76A Earthworks Reclamation sequence and Drawing 5-76B Facilities Reclamation Sequence meet the requirements of R645-301-242, soil redistribution.

In the South Lease, the location of 36.2 acres of interim reclamation at the borrow area is called out on Dwg 5-38, for completion in 2017. This interim reclamation of subsoil will develop substitute topsoil for use in the reclamation of the UG mine. Topsoil placement will be completed on 6.7 acres in 2017. Pond 4 and DD1 will be reclaimed in 2018. According to Dwg 5-38 the Facilities yard, the UG mine and Pit B1 area will be reclaimed in 2019. The remaining ponds will be reclaimed in 2021.

In the North Lease, Dwg 5-76A & B show 17.9 acres reclaimed in Year 1 (2016), of which 16.2 acres were topsoiled and seeded. In Year 2 (2017), 34.7 acres will be reclaimed and of that, 25 acres will be seeded. The remainder of the 2017 backfilled and graded area will be used for topsoil/subsoil storage and the North haul road.

pburton

## Maps Reclamation BackFilling and Grading

### Analysis:

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

jeatchel

## Bonding Determination of Amount

### Analysis:

The application did not include any changes to the currently approved bonding schedule contained in Chapter 8, Appendix 8-1 and Appendix 8-2. The applicant is currently approved to mine through Pit 11 while maintaining a minimum posted reclamation bond of \$12,450,000. The Permittee's current bonding schedule, and discussion with Permittee's engineer, shows a planned increase for minimum posted reclamation bond to \$14,600,000 to mine through Pit 13.

bwiser