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Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

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Outgoing
#3949
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Alton Coal Tract LBA EIS
Keith Rigtrup
Bureau of Land Management
Kanab Field Office
318 North 100 East
Kanab, Utah 84741

Subject: Alton Coal Lease Draft EIS

Dear Mr. Rigtrup:

SWCA and the BLM were very conscientious and have done a good job of researching the impacts of the leasing action. We commend all those who participated in the preparation and compilation of this document, it is very well written, covers a lot of material and will be valuable during the SMCRA permit review process. DOGM staff have reviewed the DEIS and we provide the following comments for your consideration. The comments are organized by DEIS section heading.

Section 1.5 Decisions to be Made and Section 1.9.2.3 Reasonably Foreseeable Future Actions

Appendix D of the DEIS is a copy of Appendix 6 from the Kanab 2008 RMP which describes the analysis of the larger Kanab Planning Area for the 20 unsuitability criteria defined in 43 CFR 3461. Section 1.8.1.1.2 summarizes the findings in Appendix D that are pertinent to the LBA and states that 43 CFR 3461.5 Criteria #2, #3, #9, #15, #16, #18, and #19 were deferred until an LBA was filed.

Section 1.5 page 1-6 states that the ROD will document special lease stipulations that would be attached to the lease. The Division review has noted the following references to lease stipulations within Section 1.5 and recommends that these be made into lease stipulations:

Criteria #3 requires a stipulation stating no mining activity may be conducted within 100 feet of the KFO Route 116 until a permit to move the road is approved. i.e. The requirements of R645-103-234 would apply, for approval of surface-mining operations within 100 feet of the outside line of the ROW for a public road.



Criteria #15, assumes that “a waiver, exception, or modification would be granted with respect to KFO RMP decisions concerning Greater Sage-grouse.” (Section 1.8.1, p. 1-10). For both “the Proposed Action and Alternative C, it is assumed that 1) mining would occur and that there would be an exemption, waiver, or modification of surface stipulations for Greater Sage-grouse (BLM 2008a: Appendix 3), and that 2) surface disturbance would be allowed within a 0.5-mile radius of a Greater Sage-grouse lek and within a 2.0-mile radius of a Greater Sage-grouse lek in brood-rearing habitat from March 15 to July 15. Without an exemption, waiver, or modification to surface stipulations, mining would not be permitted on most of the tract.” (Section 4.17.3)

Criteria #15 requires restrictions around pygmy rabbit habitat (Section 4.17)

Criteria #18 states that “High Quality Waters” to be protected on Kanab Creek are upstream of the tract and that both Robinson Creek and Kanab Creek are suitable for mining within the tract.

Criteria #19 discussion does not anticipate impacts to acreage identified as AVF, and states that if the BLM decides to offer the tract for competitive leasing and a lease is issued, a more detailed study of potential AVFs would be required as part of the permitting process under SMCRA and State of Utah coal mine permitting requirements.

Appendix D of the DEIS states that 101 acres within the Alton Town limits have been removed from leasing.

The Division review has noted the following references to lease stipulations within Chapter 4 of the DEIS and recommends that these be made into lease stipulations:

- The successful bidder would be required to employ skyglow minimization measures for nighttime mining operations. (Section 4.2.1)
- Nine lease stipulations with regard to cultural resources. (Section 4.4.1)
- The successful bidder would follow internal protocol and BLM BMPs to reduce and mitigate fire risk. (Section 4.5.1)
- Invasive annual grasses such as cheatgrass would be suppressed (Section 4.5.4.2.1 and 4.5.4.3.1)
- Impacts to water would be repaired in accordance with federal lease terms and stipulations. (Section 4.3.6.1.2)
- Eighteen wildlife stipulations and eleven sage grouse specific stipulations were noted in Section 4.17.1.2 to “help reduce the severity of impacts to wildlife and special status species.”
- Special lease stipulations to minimize adverse impacts to raptor species (Bald Eagle, Burrowing Owl, Ferruginous Hawk, Golden Eagle, Northern Goshawk, and Short-eared Owl), especially during the breeding season, by providing spatial and seasonal buffers of both occupied and unoccupied nests. (Section 4.17.6.4.2.5)
- Special lease stipulations to minimize adverse impacts on special status bird species (Black Swift, Lewis’ Woodpecker, Long-billed Curlew, and Three-toed Woodpecker), especially during the breeding season, by requiring surveys for and avoidance of nest sites. (Section 4.17.6.4.2.6).

- Permit stipulations to minimize soil erosion and degradation of water quality and quantity. (Section 4.18.3.22.)

1.6.2 Air Resources

In the areas of 200-300 feet of overburden it is estimated that air quality standards for PM10 and NO2 would be violated. Is it economically feasible for the company to mine under these conditions? Perhaps that is addressed in another section of this document or the R2P2. Most surface mines typically have less than 100' of overburden. The lessee would have to demonstrate that they could meet air quality standards prior to obtaining a permit from DEQ.

1.7 Relationship to Policies, Plans, and Programs

DEIS Section 1.7 refers to the Utah Public Lands Policy and Coordination Office position in support of coal leasing, without providing a reference to document the suitability of fee lands.

The DEIS recognizes in Section 1.5 (p. 1-6) that in accordance with R645-103-300, the State of Utah is responsible for determining unsuitability non-federal lands and non-Indian lands, which comprise 1,296 acres of the LBA (Table 1-1, p. 1-2) and for the private fee coal on approximately 378 acres of private, surface-owned land adjacent to the tract to the north (see Maps 1.1 and 1.2).

In support of suitability of these lands, the DEIS might reference the following document:

- The Informal Conference Finding and Order Cause No. C/025/005 was signed on July 28, 2008 (outgoing document 0024.pdf).

1.8.1.1.2 Application of Unsuitability Criteria

Section 1.8.1.1.2 states "All potential AVFs (57 acres) present on the tract occur in the no-coal zone...and would not be directly affected by pit disturbance." Utah Administrative Code R645-301-731.120 requires the protection of hydrologic balance of surface water from coal mining. DOGM is concerned about the protection of the hydrologic balance in the northern section of the proposed action configuration due to the close proximity of pit disturbance to AVF and Kanab Creek shown on Map 3.17. Specifically, DOGM is concerned that the minimum 100 foot stream buffer zone required by Utah Administrative Code R645-301-731.610 maybe inadequate to fully protect the hydrologic balance of Kanab Creek. The DEIS should evaluate the depth of pit disturbance in relation to the angle of draw to necessary to support the protection of the hydrologic balance of Kanab Creek. The DEIS should also consider if measures such as surface barriers will be required to fully protect Kanab Creek. This adjustment should be included in lease stipulations as it may impact the amount of maximum recoverable reserves.

Table 2.3 Regulatory Compliance or Mitigation Required by Federal, State, or Local Law and Stipulations

Table 2.3 of the draft EIS states for wetlands under Federal, State, and Local Requirements "Identify jurisdictional wetlands (USACE)" will be required. In addition, the table

should state wetlands may require a ground water management plan and USACE permit to disturb.

Section 2.3.2.1 Mining Methods and Section 4.1.1, Types of Effects

The DEIS document briefly discusses the uses of various types of underground coal recovery including augering of high wall locations, room and pillar recovery with continuous miners, and longwall extraction. There is no probable mine plan, nor is there an overburden map which will depict areas where underground techniques may be implemented.

Current conditions at the Coal Hollow Mine indicate that blasting is likely and should be included in the description of the mining method.

Information regarding the physical conditions of the Alton LBA state that a 15 foot seam thickness will be extracted from the area where cover can range from 200 to 700 feet of thickness. The DEIS states that settling of the overburden would probably cause surface deformations of at least 9.75 feet.

The Division is concerned that this amount of deflection under shallow overburden areas could create multiple surface impacts which could include openings from the surface into the mine workings. Chimney type sink holes or large tension cracks in the soil zone paralleling the longwall gate roads would be the most prevalent types of impacts.

The land could have multiple open wounds which could affect surface water flows, recreational use, and domestic and wildlife use of the area. (See page 3-40, Section 3.8.1.2, Federal Lands & Existing Land Uses On & Adjacent to the Tract).

The DEIS does not contain any description of the measures which would be required to prevent, reduce, or correct material damage to the land surface.

The DEIS does not contain any description of the measures which would be required to monitor for impacts in high tension areas, or what would be required of the Lessee to barricade off such impacts to prevent accidents from use of the surface lands by recreationists, wildlife, etc.

The Division believes that the BLM may want to consider limiting coal recovery in shallow cover areas where underground mining is to take place. Fewer impacts would occur by increasing the area which is surface mined, rather than trying to implement underground continuous mining methods in the shallow cover areas.

It may be possible to improve the economic recovery of coals under the shallow cover (300 – 500 feet of cover) areas by implementing

- 1) A mine wide blasting regime to remove overburden depths greater than 200 to 300 feet.
- 2) Adding a dragline to the shovel/truck combination to enhance the economics of the burden removal process, or
- 3) A combination of 1 and 2.

In conclusion, the Division believes multiple impacts will occur to the land surface where underground secondary extraction methods are implemented under thin overburden. These impacts will create dangerous openings for wildlife and recreational users. Chimney type sink holes could develop (based on the type of mining method utilized) long after mining is completed.

The DEIS does not contain any description of the measures which would be required to monitor surface impacts in high tension mining areas (such as above longwall gate roads) and in areas where continuous mining retreat methods are used and stumps of coal left can affect surface deformation.

The surface deformation monitoring regime must include a requirement to adequately record identified surface impacts, and a 24 hour notification requirement to the BLM and the DOGM where impacts could create hazards for humans, and/or wildlife.

2.4.2.3 Sage Grouse Timing Restrictions

We may not want to limit ourselves to just block S for these restrictions as the Alton Coal Development, and perhaps BLM and DWR will have additional data on the birds by the time the PAP is filed.

The 0.5 mile buffer is smaller than what is currently recommended by consulting wildlife agencies. Language that doesn't limit the agencies to prescriptive buffers should be used in the EIS and lease stipulations.

3.1.2 Supplemental Authorities and Other Resources, Values, and Uses Brought Forward for Analysis

Table 3.1 in Section 3.1.2 states that Prime Farmland was not brought forward for analysis. However, it is not noted whether the NRCS was consulted on the existence of Prime Farmland within the tract. Prime Farmland is defined by SMCRA as those lands which are defined by the Secretary of Agriculture in 7 CFR 657 and which have historically been used for cropland. Section 3.4.1.1 of the DEIS indicates that over 20% of the land is agricultural. Prior to obtaining a mining permit from the State of Utah, the prime farmland status must be determined for all permit applications, in accordance with R645-301-221. The designation of prime farmland does not preclude mining, but it does involve additional requirements during permitting, operations and reclamation. In fairness to the potential bidders, all agricultural lands in the LBA should be surveyed in accordance with the requirements of R645-302-313.100 and R645-302-313.200 and the results included in the DEIS.

Section 3.3.1 Climate and Weather

Section 3.3.1 states that data recorded at the Cedar City Station, approximately 43 miles northwest of the tract, were considered representative of the tract's location and used for the air dispersion modeling found in Appendix K. Since obtaining a permit in 2009, Alton Coal Development has established several weather stations at the Coal Hollow mine site. These stations are monitored and analyzed regularly. Data have been provided to the UDAQ. The DEIS should be updated to comment upon this site specific air quality information.

Section 3.3.3.1 page 3-18 should be updated to states that the Coal Hollow mine received a Utah mining permit in November 2009. The DEIS states that the Coal Hollow mine would not be in operation during the operation of the tract. This statement is not correct, as the preferred reclamation scenario for the Coal Hollow Mine is to delay reclamation of the final pits and incorporate adjacent leases into the mining plan (See 0250005 Mining and Reclamation Plan, Map 5-35).

Section 3.13 Soils

The DEIS soil description relies upon the 1987 Utah International Inc. soil report in the Permit Application Package (PAP) 025/0003. The report is cited in its entirety as UII, 1987. As the UII PAP covers many volumes, the DEIS should cite the specific chapter conveying the information concerning soils.

Very comprehensive soil surveys were completed by Alton Coal Development in 2007 and 2008 for the permit area (025/0005 MRP Chapter 2 Appendices). This area is similar to the adjacent LBA. These more recent soil surveys follow the standards of the National Cooperative Soil Survey. A comparison of the soil data acquired in 2008 by vegetation type may be a useful tool for interpolating the soil types expected to be found within the LBA. Further specific factors used to determine “sensitivity” as described in Section 3.13.1, Table 3.25 and Table 3.26 might be related to soil type.

3.16.1.4 Surface-Water Quality

The text states that Table 3.31 is “a summary of current (2005-2010) water quality data for streams...were obtained for eight sites in or near the tract from DOGM water-quality database (DOGM 2008b).” The reference section DOGM 2008b states “Accessed September 8, 2008.” These items appear to contradict themselves as the table cannot include 2010 data if it was accessed in 2008. DOGM recommends Table 3.31 and/or DOGM 2008b reference be updated to include all current data.

4.2.3.4 Alternative C: Reduced Tract Acreage and Seasonal Restrictions

The closure periods and buffer distances should be included as lease stipulations.

If the mining sequence includes simultaneous development of 2 pits at 240 acres each, the Lessee would have to ensure compliance with R645-301-553. This should be a lease stipulation also. The Coal Hollow Mine permit currently allows for only 40 acres of disturbance at any time.

4.2.5 Potential Mitigation Measures

Items listed in this section also make good lease stipulations.

4.3.1.3 Alternative C: Reduced Tract Acreage and Seasonal Restrictions

Generally speaking the rule of thumb for surface mining is 10 feet of overburden to 1 foot of coal. What mining methods have been proposed to mine at depths of 200-300 feet? These depths typically require a dragline and loader operation. How much surface disturbance will be exposed during any given time of the mining operations? Right now Alton Coal Development (ACD) is limited to 40 acres of pit disturbance on the Coal Hollow mining permit. Where is the storage location for the 200'-300' of overburden? How is the mine going to achieve approximate original contour, (AOC), in both the area they store the waste rock and the area they reclaim, after they mine through the area?

4.4 Cultural Resources

ACD currently has a Cultural Resource Management Plan (CRMP) and data recovery plan for the permitted portion on private land. This plan could and should dovetail with the CRMP and data recovery plan for the federal PAP.

4.4.1 Regulatory Framework

Another lease stipulation might include onsite monitoring during topsoil removal. ACD has committed to that in their current permit. What does the BLM have in mind for enforcing the lease stipulations once the LBA is awarded and they are incorporated into the DOGM permit?

The BLM and DOGM need to develop a protocol for seeing that the lease stipulations once incorporated into the SMCRA permit are properly implemented.

Again economic feasibility, (in the areas of 200-300' of overburden), should play a key role in the development of the CRMP and data recovery plans.

4.8 Land Use and Access

In addition to grazing and recreation in the SMCRA permit there is also wildlife. Maybe this was picked up in another section but there are a number of wildlife species not just the livestock that would also be displaced during the life of the mine. Shouldn't this section of the document focus on the displacement of these species and their habitats as well? Mitigation measures as well as lease stipulations should be included in this section.

4.15.3.3.2 Upland Areas

The last sentence on page 4-111 might be more appropriate to the sequence of surface mining and reclamation activities if it were to read "*Active restoration would be needed as surface mining operations progress and the land has been regraded*". This captures the surface mining requirement of reclaiming as contemporaneously as practicable.

Section 4.16.2.1 Surface Water

Impacts to stream channel condition are assessed according to the length of stream altered or realigned and the number of stream crossings required for mining operations. In addition, one or two stream crossings of Kanab Creek would be required. The plan of action for mining through or avoidance of Kanab Creek and Robinson Creek should be outlined.

4.16.2.1 Surface Water and 4.16.2.2 Groundwater

The 630-acre mine permitted by DOGM (permit #C/025/0005) has been operational for just over one year now. DOGM recognizes that the DEIS was in preparation prior to start up operations at the existing mine. The surface and groundwater sections prepared in the DEIS relied heavily on a report prepared by Petersen Hydrologic in 2007 "*Investigation of the Groundwater and Surface –Water Systems in the 630-Acre Proposed Coal Hollow mine Permit and Adjacent Area...*"). Data from the operational mine are now available to better estimate groundwater inflows rates produced from the water-bearing strata and also water quality impacts to surface water bodies in the proposed lease tract area. These data can be found in the DOGM online database found at: <http://linux1.ogm.utah.gov/WebStuff/wwwroot/wqdb.html>

Access to all past and present permitting actions at the Coal Hollow Mine can be found at: <http://linux1.ogm.utah.gov/WebStuff/wwwroot/coal/filesbypermitinfo.php>

The Division has prepared a Cumulative Hydrologic Impact Assessment for the Alton area. That document can be referenced at:
<http://linux1.ogm.utah.gov/WebStuff/wwwroot/coal/chias.php>

The Coal Hollow mine has been operational for one year now where DOGM has had an opportunity to observe groundwater inflows into the active mine pit areas. The alluvial sediments consisting of silty sandy clayey material are the predominant surface layer at the mine site. This material overlies the tropic shale and is considered the principal water-bearing formation in the area of the mine. The Division of Oil, Gas, and Mining recommends that groundwater loss estimates be revised based on the current mine dewatering actions that have been undertaken at the ~658-acre Coal Hollow mine.

The mine is in the process of implementing a plan to divert groundwater originating from this alluvium zone since it has caused an unanticipated nuisance by flowing into the mine pits. At the time of the writing of this document, current pit operations are focused in the northeast corner of Section 30 and the southeast corner of Section 19 of T39S R6E. Original estimates of groundwater inflows were underestimated in these areas at rates of approximately 1-2 gallons per minute. Observed groundwater inflows originating in this alluvial material flows depend upon the season and climate cycles but have been observed at rates up to 25 gallons per minute.

Initially, the groundwater from the mine pits was pumped to the on-site sediment ponds; however, this was found to overwhelm the sediment pond network and prohibit them from functioning for their intended use, which is to collect storm water runoff from all disturbed areas within the mine permit boundary.

The mine is in the process of revising their plan to collect this alluvial groundwater upgradient of the mine pits and reroute it so that it will be diverted away from the mine pits. The plan includes collecting the water through trenches or piping to a settling impoundment where solids will be allowed to settle out prior to it being discharged to a location along Lower Robinson Creek (LRC). This discharge point was recently added to the existing Utah Pollution Discharge Elimination System (UPDES) permit for the Coal Hollow Mine Permit #UTG040027 for this purpose.

DOGMA has particular concern in the area of Section 18 of T39S R5W where the amount of overburden increases up to 300 feet. It is presumed that the majority of this material is alluvial sediments. The alluvium in this area is likely coarser than what has been observed in the western sections of the active mine area where groundwater inflows have been estimated up to 25 gallons per minute. Coarser sediments will be more hydraulically conductive and capable of transporting large volumes of water to any high wall that is placed in this area, which is proposed for underground mining. Dewatering of the high wall area will require the groundwater to discharge to a surface water body. Discharge of large volumes of water from this alluvial material could affect the water quality discharging to a downstream water body and the integrity of the stream channel causing its morphology to change as a result of high volume discharges.

In the case of Lower Robinson Creek, more frequent discharge of alluvial groundwater to the channel will cause erosion and further degradation to an already unstable ephemeral channel, but increases in rates of groundwater discharged to LRC that otherwise would have been lost to evapotranspiration, could benefit downstream water users. Therefore, it is imperative for the BLM to factor these mine dewatering actions into the DEIS in evaluating any possible negative environmental impacts to downstream water users.

4.16.4.1.1 Stream Proper Functioning Condition

This section discusses the realignment of LRC as if this will happen under the proposed lease action. A realignment of LRC has already taken place as part of the existing Coal Hollow Permit (#C025/0005). This section discusses this realignment as if it is yet to occur. No map was provided referencing where this realignment area is located, but it was assumed based on the 0.49-0.81 mile segment of LRC, to be the same segment already permitted and depicted on Map 5-20 in the Coal Hollow Mining and Reclamation Plan.

This diversion of LRC was intended to be temporary because planned coal extraction is to occur in the area where the natural channel of LRC was located. Open pit mining of this area is scheduled to occur within the next year. Once open pit mining in the area of the natural channel of LRC is complete, this area is to be reclaimed. It is very likely that by the time the BLM issues their decision to lease, this area will have already been reclaimed. Assuming this relocation of LRC discussed in the DEIS and the temporary diversion of LRC already permitted are one and the same, it could be argued that this information is not relevant to the DEIS.

4.16.4.1.1 Surface Water Quality

The discussion in this section states that no direct adverse impacts to surface water quality are likely. The DEIS makes the assumption that all surface water runoff would be captured by the ponds and would not discharge to any downstream water body. Experience at the existing mine demonstrated that the occurrence of back-to-back high precipitation storms is plausible in the Alton area. Therefore, it should not be assumed that the ponds are designed for total retention and no discharge from the retention ponds will occur. A sediment pond network that will ultimately be proposed for the lease tract will require discharge outfall points to surface water bodies under a UPDES permit. A typical UPDES permit for a coal mine in Utah requires that parameters such as flow, total iron, total suspended solids, and oil and grease to be monitored. The UPDES effluent parameters establish effluent limits established in the permit.

These effects could be temporary once the mine operator becomes aware of the problem and implements mitigation measures, but nevertheless, impacts are certainly possible.

4.16.4.2.1 Groundwater Hydrology

The discussion in this section states that the source of water used for dust suppression will originate from groundwater. Current mining operations on the existing private tract have demonstrated that water used for dust suppression has come from the water retained in sediment ponds and not pumped from groundwater wells. Based on the volumes of water that have been observed at the mine and higher than estimated hydrologic conductivity of the alluvial sediments, it is unlikely that any groundwater will need to be pumped for dust suppression purposes.

4.17.1.2 Lease Stipulations

These are great and they parallel a number of our regulations.

Page 4-134, the 4th stipulation up from the bottom states that “*Where practicable* avoid storing mining-generated spoil and topsoil stockpiles on intact sagebrush stands”. The phrase “where practicable” should be deleted where ever it is used in the DEIS. Also bear in mind that storage of anything on an undisturbed area is a violation of SMCRA.

4.17.8 Potential Mitigation Measures

Potential mitigation measures could also include solar powered flashing signs at critical crossings during migration periods for deer and elk, (personal communication with Dustin Schaible, UDWR).

Appendix A Maps

The pit disturbance outline shown on Map 3.17 is difficult to interpret.

Map 3.17 references the AVF Study Area conducted in Appendix E *Reconnaissance Alluvial Valley Floor Investigation in the Alton Coal Tract LBA and Adjacent Areas, Kane County, Utah*. This Map should be updated to include AVF evaluation for the entire proposed action configuration. i.e. Robinson Creek north and east of the existing coal mine.

Thank you for the opportunity to comment.

Sincerely,



Daron Haddock
Coal Program Manager