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TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

May 21, 2013

TO: Internal File

THRU: Priscilla Burton, Soil Scientist, Team Lead *PWB/bm/sas*

FROM: Joe Helfrich, Biology *JCH*

RE: Coal Hollow Midterm Permit Review, Alton Coal Development Company, Coal Hollow Mine, Permit C/025/0005, WG4317

SUMMARY:

On April 2, 2013 the Division notified ACD of the commencement of the midterm review of the Coal Hollow mine. This memo will include a review of item A:

A review of the Plan to ensure that the requirements of all permit conditions, division orders, notice of violation (NOV), abatement plans, and permittee-initiated Plan changes approved subsequent to permit approval or renewal (whichever is the most recent) are appropriately incorporated into the Plan document.

Text changes and pagination associated with task # 4100 in Chapter 3 and appendix 3-5. have been identified as follows:

R645-301-121-300,

- 1) Pagination associated with task # 4100 in Chapter 3 and appendix 3-5 have been identified during the mid-term review that eliminated references to a commitment previously found in the MRP. Please reinstate the following commitment on page 13 in appendix 3-5 with the following language. ***“ACD will meet with DOGM and DWR six months prior to conducting mining and reclamation activities in the Alton Lek area to discuss methods, using the best technology currently available, to avoid impacts to the sage grouse.”*** Sage Grouse Monitoring information in the current Appendix 3-5 is located on pages 19-25. [JCH]
- 2) The Table of Contents for Chapter 3 lists page numbers for Reclamation Plan Sections 340, 341 341.100 and 341.200, however these sections could not be found in the MRP. These pages may also have been inadvertently eliminated with task #4100. Please reinstate these sections of the MRP (refer to JCH tech memo for exact text to be reinstated). [JCH]

In addition, after reviewing Special Condition #6 in attachment A of the Permit and the biology and cultural resource commitments in the MRP and given the current sequence of events that have transpired at the Coal Hollow mine in the past 2 months, compliance with Special Condition#6 will be discussed with Division management.

TECHNICAL ANALYSIS:

PERMIT CONDITION REVIEW

Analysis:

Permit Condition #6 states that *“Satisfactory compliance with the Alton Sage-Grouse Habitat protection Plan is required. Alton Coal Development, LLC will use best technology currently available to achieve the objectives of the plan in order to minimize the disturbances and adverse impacts to the sage grouse and related habitat and to enhance those resources where practicable. ACD will cooperate with the Division in consultation with state and federal wildlife agencies to develop reasonable practices as are deemed to be necessary to implement the plan and to measure success and to achieve the goals of the plan.”*

ACD is non-compliant with the requirements of this permit condition as noted in the following chronology:

During the Midterm Review site visit on April 30th the Division’s review team (Priscilla Burton, Pete Hess, Karl Housekeeper, Ken Hoffman and Joe Helfrich) observed that revised diversion ditch #1 had been constructed through the active historic lek during the active lekking period (February 15th through May 15th), and pond 4 construction had taken place in critical nesting and brood rearing habitat during the onset of the sage grouse nesting period. During the site visit Larry Johnson and Kirk Nicholes were reminded of the commitment to initiate consultation with DOGM, DWR and FWS six months prior to mining through the lek.

On May 2nd the Division sent an email to ACD stating that ***“We do recognize that ACD has received approval for the Change in Mining Sequence amendment. However ACD needs to also recognize that the implementation of the amendment needs to be accomplished in a manner that achieves compliance with the coal regulations which include avoiding potential impacts to wildlife. Given the circumstances in this situation the Division has determined that the closure periods for the life cycle of the Sage Grouse would apply to all of the new activities associated with the Change in mining sequence amendment and recommends that an in depth bird survey be conducted after Sage grouse chicks could safely hatch to determine if there is occupancy in the proposed disturbed areas and under what conditions if any the company may proceed. The Division is also reviewing the mine sequence change activities that have occurred to date in accordance with the coal program regulations to determine if there are any compliance issues.”***

On May 6th Division biologist Joe Helfrich met with Kirk Nicholes and Steven Petersen from ACD, and Dustin Schaible (Wildlife Biologist) and Rhett Boswell (Habitat Biologist) from DWR. The purpose of the site visit was to initiate consultation and verify the location of the historic lekking area and critical nesting and brood rearing areas in lite of construction of diversion ditch D1, pond #4 and the proposed mining sequence change.

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On May 7th Division biologist Joe Helfrich met with Rhett Boswell from DWR at the DWR office in Cedar City. The meeting included a review of the proposed mining sequence change provided by Kirk Nicholes and a discussion of avoidance, minimization and mitigation measures and applicable temporal restrictions associated with the life cycle of the sage grouse.

On May 8th the following email was sent from Joe Helfrich to Dustin Schaible and Rhett Boswell:

“Dustin & Rhett,

Thank you for taking time out of your busy schedules to meet with Kirk Nicholes, Dr. Petersen and me at the Coal Hollow mine on Monday, May 6th. As you know the purpose of the site visit was to A) more accurately define the historic Sage grouse lekking, nesting & brood rearing and wintering areas based on institutional knowledge from Dustin & Dr. Petersen, B) discuss the locations of haul roads that would pass through the traditional Lek area from the currently mined and coal stockpile areas to pit # 28 in light of the change in mining sequence activities at the mine and C) visit the 2012 vegetation treatment areas and conservation area near the mine. Having done that the Division is requesting DWR to provide recommendations on conservation measures that could minimize impacts to the Sage grouse during critical periods of their life cycle. A response by way of "E" mail will be adequate to complete the consultation requirements with your agency.....Joe”

On May 14th DOGM staff represented by Karl Housekeeper and Joe Helfrich and the Office of Surface Mining (OSM) Elizabeth Shaffer and Howard Strand visited the Coal Hollow mine. The purpose of the visit was to *“evaluate whether DOGM (the Division) is implementing its approved regulatory program by ensuring that the Utah program is successful in preventing offsite impacts to listed or proposed threatened or endangered species by ensuring that operators follow a **Protection and Enhancement Plan** to minimize disturbances and adverse impacts to threatened and endangered species (when species are identified within the permit area) as a result of mining activities, and whether mine operators are complying with applicable regulatory and permit requirements pertaining to the minimization of adverse impacts to threatened and endangered species and their habitat during coal mining and reclamation operations.”*

The site visit included sage grouse habitat improvements Pinyon-Juniper removal (mechanical) and rabbitbrush (chemical), lekking areas, the active pit, sediment ponds, revised diversion ditch #1 and pond #4. ACD was observed actively constructing the pond contrary to the Divisions request to hold off on constructing the pond until consultation with DWR and FWS had been completed.

On May 19th the Division received DWRs consultation recommendation in this email;
Hi Joe,

I apologize for not getting something to you sooner. I thought you may have gotten all you needed from our meeting last week in Cedar. I forgot that I was going to put something in an email for you. See summary below:

Change in mine sequence:

The original mine sequence was used to analyze impacts to grouse in the area. Based on the original mining sequence mitigation measures were agreed upon during the permitting process. The new sequence calls for new impact analysis as the timing and location of the new activity is occurring on the most critical area for grouse using the sink valley lek. The new sequence will directly disturb the lek area during sage grouse nesting and brood rearing. The DWR recommends that the mine follow the guidance provided in Utah's new [Greater sage grouse plan](#).

The plan has three simple steps to address disturbance within sage grouse habitat:

- 1) Avoidance of disturbance to habitat or birds by an activity is the preferred option;*
- 2) Minimization of the disturbance is desired if the disturbance cannot be avoided in greater sage-grouse habitat, with mitigation for the effects of the minimization decisions; and finally*
- 3) Mitigation of the disturbance from an activity within sage grouse habitat is required if a disturbance cannot be avoided.*

The plan has specific recommendations for addressing disturbance in lekking and nesting/brood rearing, winter, and other habitat. See pages 21-24 in the plan for specific details.

The new mining sequence as DWR understands, will directly impact sage grouse nesting/brood rearing habitat. The lekking period typically goes from February 15th to May 15th in this area, which has now passed. As DWR understands, there has already been disturbance following the new mining sequence during this period. We are now within the nesting/brood rearing period which is when the grouse are most vulnerable to impacts from ground disturbance. Therefore, DWR recommends that the mine employ seasonal timing restrictions on the new mining sequence from May 15th to August 15th. The mine must demonstrate why avoidance is not possible during that period. If avoidance is not possible the mine must employ minimization and/or mitigation techniques as outlined in Utah's Greater Sage-grouse plan. Prior mitigation efforts were based on the prior mining sequence. If avoidance is not an option for the mine then new mitigation should be considered for the new disturbance. The mine must recognize the temporal loss occurring. One cannot assume that mitigation efforts thus far have created the quality of habitat that the new mining sequence will disturb. Remember, the disturbance itself is a permitted activity and is not the main concern as we feel reclamation and mitigation will eventually return ecological function to the area. It is the time of the disturbance that is the main concern. The wet meadow IS the primary brood rearing habitat to which there is no alternative in the area. Avoidance may be the only way to avoid that temporal loss.

The DWR appreciates the opportunity to provide input, please contact me with further questions.

*Thanks,
Rhett*

Findings:

This information will be brought forward to management for input and decision, because the Division and Alton Coal Development, LLC reached an agreement concerning Stipulation #6 in a "Settlement of and Request for Order of Dismissal" filed with the Board on March 15, 2012.

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COMMITMENT REVIEW

Analysis:

Title: Minimizing Adverse Impacts to Wildlife

Objective: The Coal Hollow project will minimize disturbances and adverse impacts to fish and wildlife and related environmental values. The project will comply with the Endangered Species Act of 1973 during coal mining and reclamation operations.

Frequency: NA

Status: Ongoing

Reports: As needed

Citation: R 645-301-333 Chapter 3, page 3-44

Findings:

The permittee is non-compliant with this commitment. The reader is referred to the chronology of events that are listed under *Permit Conditions* at the beginning of this technical analysis, top of page 2. This information will be provided to management for input.

Analysis:

Title: Developing the Hoyt's Ranch Connectivity Corridor

Objective: To reestablish connectivity between the Alton and nearby Hoyt's Ranch sage grouse populations.

Frequency: NA

Status: Ongoing, radio collared birds from the Hoyt's Ranch population have been using the corridor in 2008, 09, 10.

Reports: Annual summary of work completed to date

Citation: R 645-301-333 Chapter 3, Appendix 3-5 page 4

Findings:

The permittee has participated in the development of the corridor in the past. However there are currently no plans for the mine to further develop the corridor. ACD has committed to and has monitored the vegetation in the Hoyt's Ranch corridor

Analysis:

Title: Sage Grouse Conservation Area

Objective: To protect and develop a 72 acre parcel of sage grouse habitat.

Frequency: NA

Status: Ongoing

Reports: Annual summary of work completed to date

Citation: R 645-301-333 Chapter 3, Appendix 3-5 page 13

Findings:

Development of the conservation area is ongoing in 5 year increments. The first mosaic was developed in 2010 and was sampled in 2011 and 2012. Ocular estimates indicate abundance of grasses, forbs and new sagebrush plants.

Analysis:

Title: Reduction of Juniper Trees within Key Habitats of the Alton Area

Objective: To reduce raptor and raven perches and increase sage grouse habitat.

Frequency: NA

Status: Completed in 2006

Reports: Annual summary of utilization for nesting and brood rearing.

Citation: R 645-301-333 Chapter 3, Appendix 3-5 page 9

Findings:

This activity is an ongoing part of the permittees sage-grouse mitigation plan. Vegetation treatment data can found in the 2011 and 12 progress reports.

Analysis:

Title: Restoration of Sage Grouse Habitat

Objective: To reduce the sagebrush density to 25% cover.

Frequency: NA

Status: Mosaic of areas disked and seeded fall of 2010

Reports: Annual summary of work completed to date

Citation: R 645-301-333 Chapter 3, Appendix 3-5 page 13

Findings:

This activity is an ongoing part of the permittees sage-grouse mitigation plan. Vegetation treatment data can found in the 2011 and 12 progress reports.

Analysis:

Title: Lek Management

Objective: To attract birds to an alternate lek during active mining operations.

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Frequency: NA

Status: Ongoing each spring during active mating periods

Reports: Annual summary of work completed to date

Citation: R 645-301-333 Chapter 3, Appendix 3-5 page 17-19

Findings:

Each year since the initiation of mining activities and during the active lekking period decoys and a calling device have been used to attract birds to an alternate lek site or an existing one. During the 2013 active lekking period decoys and an electronic call were used to attract birds to the historic Alton Lek and the Fords pasture area.

Analysis:

Title: Restoration of Lekking Habitat

Objective: To restore the original lek at the end of mining activities.

Frequency: NA

Status: Restoration of the lek will begin at final reclamation

Reports: Annual summary of work completed to date as reclamation begins.

Citation: R 645-301-333 Chapter 3, Appendix 3-5 page 12

Findings:

Mining activities are ongoing at the Coal Hollow mine. The lek has not yet been eliminated.

Analysis:

Title: Sage Grouse Monitoring

Objective: To monitor the population densities at the Hoyt's ranch and Alton leks and migration patterns in between as long as the birds are living.

Frequency: NA

Status: Ongoing, meet with DOGM 6 months prior to mining through the lek to discuss minimizing impacts to the birds.

Reports: Annual summary of work completed to date

Citation: R 645-301-333 Chapter 3, Appendix 3-5 page 13

Findings:

The current page 13 in appendix 3-5 does not include this commitment. The permittee needs to reinstate this commitment with the following language. *"ACD will meet with DOGM and DWR six months prior to conducting mining and reclamation activities in the Alton Lek*

area to discuss methods, using the best technology currently available, to avoid impacts to the sage grouse.” Sage grouse Monitoring information in the current Appendix 3-5 is located on pages 19-25.

Analysis:

Title: Predator Control

Objective: To effectively manage predators and increase the population of birds at the Alton lek.

Frequency: Annually

Status: Completed for 2010

Reports: Annual summary of work completed to date

Citation: R 645-301-333 Chapter 3, Appendix 3-5 page 26

Findings:

The 2012 progress report includes an update on the efforts made during 2012 to control ravens and coyotes. Figure 16 of that document needs to also include the locations of coyote control efforts. This will be annual reporting review requirement.

Analysis:

Title: Wildlife Awareness Program

Objective: To provide protection for the resident wildlife and minimize impacts, (collisions), from vehicles and heavy equipment. During this program, sage grouse specialists (ACD, DWR, UDOGM) will provide employees specific training on sage-grouse identification, seasonal patterns in sage-grouse development and movement, and deer and elk observations and migratory patterns in the Alton area.

Frequency: Continuous and as needed for new employees throughout the life of the mine.

Status: Ongoing from the onset of mining activities.

Reports: Annual, log of road kills for deer, elk, sage grouse and domestic livestock from the mine site to highway 89

Citation: R 645-301-333 Chapter 3, pages 3-56

Findings:

The permittee needs to include a commitment in chapter 3, page 3-56, 57 to maintain a log that includes the names of individuals (biologists) from either ACD, DWR or DOGM that provided the training, dates of the training and information presented. This will be an annual review reporting requirement.

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Analysis:

Title: Reclamation Timetable

Objective: To ensure timely reclamation

Frequency: No more than 40 acres to be disturbed at any given time.

Status: Ongoing

Reports: Annual summary of work completed to date

Citation: R645-301-341.100 Chapter 3, page 3-56

Findings:

The following text needs to be reinstated in the MRP beginning on page 3-57

340. RECLAMATION PLAN

341. REVEGETATION

This document contains the revegetation plan for final reclamation of all lands disturbed by coal mining and reclamation operations, except water areas and the surface of roads approved as part of the postmining land use, as required in R645-301-353 *through* R645-301-357. It also shows how the Coal Hollow Project will comply with the biological protection performance standards of the State Program.

341.100. Reclamation Timetable

A detailed schedule and timetable for the completion of each major step in the mine plan has been included in Chapter 5 of the MRP. Briefly, the mine will conduct operations in one area (segment) at a time. No more than 40 acres will be disturbed at one time for mining. Once mined, the plan includes redistributing subsoil and topsoil followed by seeding this segment with the final seed mix contemporaneously, or at the same time the mining of the next segment begins. However, seeding will be accomplished only in appropriate periods (usually late-fall, but early-spring could also be an option). The mine plan has been engineered to disturb the smallest practicable area at any one time. With prompt establishment and maintenance of vegetation, immediate stabilization of disturbed areas will minimize surface erosion. Details of the plan has been included in Chapter 5 of this document.

341.200. Reclamation Description

The Coal Hollow Project will be reclaimed and revegetated to meet the appropriate postmining land use. Most areas will be reclaimed to the native plant communities that existed prior to mining conditions. Other areas will be reclaimed to enhance habitat for sage-grouse or other wildlife species. Finally, in those areas where the landowner requests a change in the plant community to increase productivity for domestic livestock, they will be reclaimed accordingly.

341.210. Seed Mixtures

Revegetation seed mixtures for each plant community disturbed by mining activities in the Coal Hollow Project area is given in this section. Table 3-36 shows the plant communities that may eventually be disturbed by mining operations at the Coal Hollow Project area.

Table 3-36: Vegetation Communities of the Coal Hollow
Permit Area Proposed for Disturbance
MAP SYMBOL PLANT COMMUNITY
(see *Vegetation Map*,
Drawing 3-1)
S/G Sagebrush/Grass
P Pasture Land
P-J Pinyon-Juniper
M Meadow
OB Oak brush
RB/SB Rabbitbrush/Sagebrush

Seed mixtures for each disturbance type are shown on Tables 3-37 through 3-42. These rates have been based on drill seeding methods described in this document. When broadcast seeding is employed these rates will be doubled.

Analysis:

Title: Cultural Resource Data Recovery Treatment Plan

Objective: To determine the nature and extent of cultural resources identified in the most recent survey

Frequency: NA

Status: Completed fall 2010.

Reports: Data recovery information received by the Division 11/17/10.

Citation: R645-301-411.140, Volume 2, Chapter 4, page 4-4

Findings:

This commitment was completed in the Fall of 2010.

RECOMMENDATIONS:

The midterm review is not recommended for approval at this time.