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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

February 27, 1998

TO: File

THRU: Daron Haddock, Permit Supervisor *Jch*

THRU: Joe Helfrich, Permit Supervisor *Jch*

FROM: Susan M. White, Senior Reclamation Biologist *SMW*

RE: Round IV Permit Application, Canyon Fuel Company, LLC, Dugout Canyon Mine, PRO/007/039-97A, File #2, Carbon County, Utah

SUMMARY:

Administrative Completeness was issued September 23, 1996. Response to the Round I permit application deficiencies were received by the Division May 21, 1997 and the Division responded August 1, 1997. Round II was submitted by the Permittee September 9, 1997 and the Division responded October 28, 1997. Round III was submitted by the Applicant November 13 and the Division responded to January 5, 1998. Round IV was submitted February 4, 1998 and this memo is a response to this current submittal. The initial permit was submitted March 15, 1996.

The bold and underline portion of this punch list is the response given by the Applicant to the January 5 punch list. This memo does not list the new deficiencies found in the February 4, 1998 submittal.

LIST OF DEFICIENCIES

General Contents

R645-301-120. Canyon Fuel Company is applicant, permittee and operator. The application refers to SCM as the Operator, this should be changed as pages are modified and replaced with other revisions.

The Applicant did not respond to this comment.

Soils

R645-301-234.200. Some of the topsoil from Dugout will be located at the Soldier Canyon Mine. Does the possibility exist that Soldier Canyon Mine will be reclaimed prior to Dugout and if so how will the reclamation effect the Dugout topsoil?

The Applicant did not respond to this comment, however, the reviewer has obtained more information to satisfy this question. This reviewer did learn that the Soldier Canyon topsoil pile has large quantities of cheatgrass which is detrimental for revegetation. All cheatgrass must be eliminated prior to the Dugout topsoil being brought on site.

R645-301-521.165. Map of where saved (geotextile) soils are located.

The Applicant responded to this comment however, cross sections of corresponding locations for reclamation do not show that the soils were saved.

R645-301-242. If the areas of in place covered topsoil (geotextile) are to steep to remove soil then how will the topsoil be loosened in revegetation efforts so that it remains on the slope?

Response was too vague to evaluate.

Vegetation removed from the site during or prior to topsoil stripping should be placed on and in the topsoil stockpile.

This comment was a suggestion. The Applicant responded in such a noncommitted manner that the comment in the application should be removed.

Biology

R645-301-353.110. How will species diversity be sampled in the spring of 1998? How will species diversity be demonstrated for bond release.

The Applicant stated that diversity will be compared to the SCS range site in lieu of sampling. This is acceptable however, no information was given for this range site. A comment is given that bond release variables will be compared using the Student T test, however no comparison values were given.

R645-301-322.200. Dugout Canyon has high value habitat, the permit must recognize the riparian area and cliff escarpments as such.

The Applicant states that the Dugout Canyon has high value habitat. However, the application continues to remark that "SCM" is unaware of any "unusually" high value within the disturbed area. The application should state the definition which is being used for "unusual" high value habitat. This reviewer considers the riparian area to be unusually high value habitat.

R645-301-356. Vegetation success standards remain confusing and contradictory.

Reference areas

Prelaw disturbances, postlaw disturbances, post exploration disturbances

Many different baseline studies

Many different names of vegetation communities referring to the same vegetation communities

Confusing references to a reference area has been clarified. All other items remain confusing. A qualified person should be working in this section. Affected areas, disturbed areas, and exploration areas have not been clarified. Vegetation bond release standards refer the reader to Appendix 3-1. Numerous standards are found in that Appendix. Productivity must be sample in the proposed disturbed communities.

R645-301-356.110. A detailed methods section for the Patricia Johnson study is required.

The response given meets the requirements of this regulation.

R645-301-356.120. Deciduous Streambank, Shrub/Grass/Juniper and Mixed Conifer communities to be disturbed require baseline sampling prior to permit issuance.

The permit application has removed these communities from the disturbed area. This response meets the requirements of the regulation.

R645-301-323.400. Plate 3-1A and Map MNS-1 contradict.

The application has clarified why Plate 3-1A and Map MNS-1 contradict. However now Plate 3-1 and Plate 3-1A contradict. The large number of vegetation maps are unnecessary.

R645-301-330. The permit commits to disturb minimum area required, yet 1000' of culvert is beyond that which is necessary for the proposed operation. Only that area necessary for the current mine can be culverted.

The Applicant changed the permit to not state that only the minimum area will be disturbed. Yet the regulations require that only the minimum area be disturbed. Additionally the regulations require that disturbance to the Riparian area be avoided where possible. The application must remove the culvert below the turn a round.

R645-301-358.200. Covering raptor nests prior to subsidence is not approved. Avoidance will be discussed on a case specific basis. Losing raptor nests to subsidence is not a given right of permit issuance, avoidance is the highest priority.

The subsidence (Plate 5-5) and cliff escarpment maps (Plate 3-3) show that escarpment failure from subsidence is likely when mining in Section 16 in 2001. This is where several golden eagle nests are located (Plate 3-2). Site specific information is request on the expected subsidence and effects it may have on the nests. Details of the exact locations of the nests are needed - are the nests located on a cliff escarpment?

Comments regarding specific protection measures (i.e. fencing) have been removed. No discussion was provided which assessed specific options such as avoidance (i.e. recoverable coal lost). No information was given on the expected subsidence and the effects on the nests. The response states that 6 months prior to mining a decision will be made. This is not acceptable, mine plans are approved on a five year basis. Nests affected in that current five year period must be addressed. This includes the nests in section 16, 22, and 23. All raptor nests are protected whether active or dilapidated and impacts along with avoidance must be discussed prior to permit

issuance. If the Division agrees that avoidance is not possible then reducing impacts must be discussed. Discussion should include moving nest to identical habitat, habitat (ledge) created from subsidence, etc.

R645-301-333. Need commitment that during construction employee's (including contractors) and equipment will stay within the disturbed area boundary and not just requested to do so as stated in the permit. Additionally all loading, unloading and staging of materials and equipment will be done within the disturbed area boundary.

The Applicant has responded to this deficiency in an acceptable manner.

R645-301-342.100. Enhancement features during reclamation should include regrading the creek to a usable configuration. Current maps and cross sections are inadequate to determine existing conditions and proposed reclaimed configurations. Landscape diversity of the reclaimed Dugout Creek stream channel should be at least the same as premining landscape diversity.

The Applicant has provided better maps. It is unknown if these maps were based on a field survey or if the greater detail is extrapolated.

Steep slopes above the reclaimed channel in several instances are not compatible with the post mining land use of livestock grazing. Generally slopes steeper than 3:1 will erode if used for livestock travel. Slopes steeper than 3:1 within the designated Riparian Community(Plate 3-1C) are not suitable for the stated postmining land use.

The proposed use of the three in stream stability structures at 60 foot intervals and the macro and micro channel will provide diversity to the channel. The discussion provided in Chapter 7 was theoretically very good. However, the Application fails to provide the needed application to this specific reclaimed channel.

R645-301-355. No detail is provided for seeding the area where the geotextile was used. Commit to using erosion control matting on 1.5:1 slopes. No dozer tracking perpendicular to the slope for final surface preparation, always on the contour.

Insufficient detail was given to evaluate seeding on the steep slopes of geotextile. Dozer tracking is not suitable for seedbed preparation. Cover crop planting is not approved for this precipitation zone unless the Operator can provide specific demonstration of successful use.

The plan states that a disc and drill seeder will be used on slopes less than 2:1, in most instances this cannot be done. A wood fiber mulch is proposed for use with a plastic netting for anchor. Plastic netting is not used to anchor wood fiber, generally netting is used to anchor hay. Steep slopes (2:1) require a high quality erosion control matting. The above discrepancies must be addressed.

R645-301-341 and 342. Specify size of transplants for riparian area. Cottonwoods should be at least 15 gallon containers. Provide detail for planting of riparian area, willows, cottonwoods, river birch, should be planted to water table. This usually requires an auger.

The application presents a good literature review of planting techniques used for riparian systems. Now the application should provide specific detail on how these techniques will be

applied at the Dugout channel reclamation. Does the reclaimed channel have curves for the planting specified? What is considered low, mid, and upper bank in this system. Planting depth will determine the type of technique and equipment (auger, post hole digger, etc.) used for planting. To what depth will cottonwoods and other species be planted? Specify the size of plantings.

Need to know average high and low water marks in channels for details on plantings.

The applicant did not respond adequately. Average high and low water levels need to be provided.

Where are rock faces that will not be planted, where is bedrock in channel?

No response was given.

Land Use

R645-301-412.110. Insufficient details concerning the existing road and postmining road have been provided. Accurate maps as required by R645-301-521.150 and 542.200 are needed.

Weather permitting the applicants response will be check in the field.

Chapter 5

R645-301-526 and 541.400. Need sequence for construction and reclamation of site. When will topsoil be remove and where placed. Sediment pond installation, leach field, culvert, etc.
Add geotextile removal to section 542.200.

The information was not provided.

R645-301-521.150 and R645-301-542.200. Plate 5A is confusing in that contour intervals are 2', 5', 10', and 25'. All contour intervals should be the same and at minimum at 5' intervals, but preferably 2' intervals. Is the disturbed area located at the base of the pad on the substation pad? Is the area above the substation considered a highwall?

Improved maps were submitted. A statement should be provided which describes the accuracy of the maps. Were they based on ground surveys, GPS, or topographic maps? During exploration the applicant used the portal on the substation pad. This is now considered a highwall. The applicant did not address the reclamation of this highwall.

Plate 5B does not show the culvert on the right fork, nor disturbed area boundaries.

The plate now shows the culvert.

Where are 1.5:1 slopes located in reclamation?

Maps were provided with better detail so this may be determined, given accurate maps.

All contour intervals should be the same and at minimum at 5' intervals.

Maps still vary with 2, 5, 10, and 25 foot contour intervals. However, provided that the maps are accurate (will be field checked) they are acceptable.

Plate 5-4 level of detail is insufficient to evaluate the grading and how the reclaimed area will support the postmining land use? Need detail of creek side slopes, slopes should be at a grade usable for wildlife and livestock. Disturbed area boundaries should be marked on each cross section.

Disturbed area boundaries were marked on the cross sections. Slopes to the creek do not appear to support the postmining land use.

R645-301-526.115. Is the leach field to be located on a side slope? What will be constructed first the topsoil pile or the leach field.

The topsoil pile was removed from this location.

R645-301-142 and 356.250. Plate 5C shows the "area of disturbance pre-1996" this designation should also state that the disturbance was not subject to the requirements of R645-301 through R645-302. The map should show the area subject to the requirements of R645-200 through R645-203.

Plate 5c fails to show the area subject to the requirements of R645-200 thru 203.

R645-301-525.150. How will subsidence affect the golden eagle nest sound in Section 16 scheduled to be mined in 2001.

No additional response was given.

Hydrology

R645-301-731.720 Plate 7-5 doesn't show topsoil, berms, silt fences. How does UD-1 get into Dugout Creek? What are sediment control for areas below pond? Where is Plate for reclamation hydrology?

Plate 7-5 does show berms and the topsoil pile has been removed from this site. The plate does not show silt fences, an inspector would have to go to Plate 7-8, Disturbed Area Watershed Boundaries, to find ASCA areas. This is a poor plan and has potential for NOV's because of confusion when implementing the plan. However, Mike Suflita has accepted the plan.

No Plate for reclamation hydrology could be found.

R645-301-742.312 Permit should include stream alteration permit.

Response is adequate.

R645-301-743 Operation phase shows ponds or impoundment where culvert has been buried, is this prudent or necessary, have they been designed?

Response is adequate. However prior to culverting the lower 600 feet of Dugout Creek all usable areas should be utilized.

R645-301-750 How is Permittee minimizing impacts to hydrologic balance when 1000' of stream is being unnecessarily culverted.

The response was inadequate.

R645-301-742.313 The reclaimed stream channel should be enhanced. Appendix 7-11 show typical of uniform rip rap installation (d-50) of 12". The design does not show how diversity of the channel will be achieved. Diversity of landscape will promote diversity in the flora and fauna which existed prior to mining.

The concept of reclamation for Dugout Creek presented in the plan is good. However, insufficient detail is given to adequately evaluate the current proposal for landscape diversity. Specific detail is needed to apply these concepts to Dugout Creek. What will be the exact dimensions of stability enhancement structures at each location shown on Plate 7-9. The criteria should be given for use of each structure. Why are meanders not used more to reduce velocities? Define micro and macro channel and banks with a cross section. The post reclamation channel evaluation in Table 7-10 makes a lot of assumptions that are not shown in the reclamation plan (i.e. Entire bank is rock fragments).

Page 7-92 states that the reclamation channels will be constructed after grading but prior to topsoil placement. During grading operations channels are constructed first and all grading activities proceed from that baseline. This method ensures that drainage channels will not be located on high points and that all drainage will flow to the channel.

No response was provided.

Where is bed rock in channel and how will the rip rap be keyed into the bed rock?

No response was provided for location of channel bedrock. It appears that channels will be filled and not be located on bedrock. However location of existing bedrock should be documented.