



United States
Department of
Agriculture

Forest
Service

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National Forest

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File Code: 2820-4
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Mary Ann Wright
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Division of Oil, Gas, and Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

*Revised
C/015/0032
Copy to [unclear]*

Re: South Crandall Lease Revision, Genwal Resources, Inc., Crandall Canyon Mine, C/015/0032

Dear Ms. Wright:

We have reviewed the South Crandall Lease Revision for the Crandall Canyon Mine transmitted to us by letter dated April 13, 2004. It appears that none of the deficiencies identified in our February comments (copy enclosed) have been incorporated into the current Lease Revision. These comments must be addressed before the Forest Service can consent/concur with the proposed revision.

If you have any questions, please feel free to contact either Karl Boyer or Carter Reed at the above address and telephone number.

Sincerely,

Alice B. Carlton

ALICE B. CARLTON
Forest Supervisor

Enclosure

cc:
D-2/3
Sally Wisely, BLM, Utah State Director

RECEIVED

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DIV. OF OIL, GAS & MINING



Forest Service Comments
South Crandall Lease Revision
February 19, 2004

1. Chapter 3.

The Biology chapter must include the following maps (accompanied with a discussion) for the South Crandall tract:

- a) Deer Habitat Map (showing summer and winter range).
- b) Elk Habitat Map (showing summer and winter range).
- c) A vegetation monitoring plan must be discussed for the South Crandall tract.

2. Chapter 3, Section 3.22.21, Page 3-8.

Provide a complete list of Threatened and Endangered Species (containing both plants and animals) on page 3-8 rather than referring the reader to Appendix 3-3.

3. Chapter 3, page 3-8.

The letter from UDWR referenced as being in Appendix 3-17 is not there. It should be presented in the Revision.

4. Chapter 3, page 3-9.

The Peregrine Falcon should be added to the Sensitive Species list.

5. Chapter 3, page 3-9, 2^d paragraph.

The trout in Crandall Canyon are hybrids, not pure Colorado Cutthroats.

6. Chapter 5.

Include the following:

- a) Structural contour maps for both coal seams.
- b) Interburden map depicting the rock thickness between the two coal seams.
- c) Geologic cross-sections (2) through the South Crandall tract; one oriented east-west and one oriented north-south. Geologic formations depicted should include the North Horn down to the Mancos shale.

7. Chapter 5.

There should be a Section 5.23 presented in the Revision that explains the mining methods to be used in the South Crandall tract. It should detail the different mining methods to be used in different areas of the tract; especially with regard to Little Bear Canyon.

8. Subsidence Control Plan, Section 5.25.10, Page 5-21.

The mine plan revision must clearly demonstrate that areas of Little Bear Canyon with overburden less than 600 feet will not be subsided. The last sentence on page 5-21

should be supported by clearly delineating on Plates 5-2 H and 5-2 BC, the 600 foot overburden contour in Little Bear Canyon for each coal seam. Available data indicate that the interburden between the two coal seams is less than 100 feet. Therefore, the 600 foot contours depicted on the overburden maps should not be far apart. Show the 600 foot contours in heavy line thickness so they can be clearly seen.

9. Anticipated Effects of Planned Subsidence, Section 5.25.15, Page 5-26.

Each one of the three items following paragraph 3 (items a, b and c) in this section requires correction.

- a) Plates 5-2 H and 5-2 BC don't agree with the narrative. Both plates show longwall mining in areas with less than 600 feet of overburden. The plates should be corrected to plainly show that no longwall mining will occur in areas with less than 600 feet of overburden in Little Bear Canyon.

The wording of *Item a* also requires correction. Stipulation #9 of the Decision Notice clearly states "Mining must be conducted in a manner necessary to prevent subsidence in the Little Bear **Canyon**.....", emphasis added; the DN does not refer to Little Bear **stream channel** when discussing areas outside the subsidence zone.

- b) The wording of *Item b* is incorrect. It should state that no mining, whatsoever, will occur within 1000 feet of the southeast corner of the lease until the water replacement agreement between Genwal and Castle Valley Special Services District has been implemented.

- c) Plates 5-2 H and 5-2 BC don't agree with *Item c*, i.e., both plates show longwall mining within 1000 feet of the southern boundary of the lease. No mining, whatsoever, should occur within the buffer zone until the water replacement agreement is implemented.

Additionally, no longwall mining can occur in areas with less than 600 feet of overburden in Little Bear Canyon. Observance of the 600 foot overburden restriction would remove about 1/2 of the southernmost panel in the Blind Canyon seam and about 2/3 of the southernmost panel in the Hiawatha seam. As Plate 5-2 BC is now drawn there is approximately 200 feet of overburden along the southern edge of the southernmost panel. A similar situation exists in Plate 5-2 H. This is clearly unacceptable.

Also, the clause within parentheses in *Item c*, i.e., "to protect possible water-bearing fracture system" directly contradicts the statement at the top of page 5-26b stating that the recharge fault system for Little Bear Spring is not located within the subsidence zone of the proposed South Crandall mine nor even within the South Crandall lease area. The statement at the top of page 5-26b should be deleted. The recharge mechanisms for Little Bear Spring are still not well understood. A definitive statement such as the one made on page 5-26b is not supported by the present state of knowledge regarding Little Bear Spring.

10. Subsidence Control Plan, Chapter 5, Section 5.25.

The means of protecting the powerline that crosses part of the South Crandall Lease (Sections 5 and 8, T.16 S. R.7 E.) must be discussed and the powerline route must be depicted on the maps presented in Chapter 5. The ground beneath the powerline cannot be subsided.

11. Subsidence Monitoring, Page 5-26a and Alternative Water Source Information, Page 7-29.

A copy of the Water Replacement Agreement arranged between Castle Valley Special Services District and Genwal is not provided in Appendix 7-51 as stated in the mine plan revision. The Agreement needs to be presented in the Lease Revision. It needs to demonstrate that Genwal will meet the requirements of Special Coal Lease Stipulation #17. As stated in Stipulation #17, the provisions of the Agreement must be implemented prior to mining in two areas of the tract (as identified in Stipulation #17) or an additional mining plan must be submitted to the Authorized Officer that identifies measures to be taken by the Lessee that will ensure that Little Bear Spring would not be impacted by mining.

12. Chapter 7, General.

The critical questions associated with the South Crandall Tract are whether mining will affect the quantity and quality of water from Little Bear Spring and whether there is an effective mechanism to ensure a continuing supply of culinary water in spite of this uncertainty.

Chapter 7 and Appendix 7-15, Probable Hydrologic Consequences Determination, do not adequately present a summary of the hydrologic investigations done to date.

It is not clear that Special Coal Lease Stipulations #9 or #17 have been fully incorporated into the proposed Lease Revision.

In a 26 November 2003 phone conversation with Mr. Darrel Leamaster, the manager of the Castle Valley Special Services District, he expressed his understanding and expectation that the water treatment plant will be built prior to mining in the areas of concern. To that end, Mr. Leamaster stated that Genwal and Energy West are cooperating on the agreement and have concurrently hired an engineer to begin designing the treatment plant. Darrel expects construction to begin in June 2004 and to be completed in September or October.

13. Mine Plan Area Aquifers, Section 7.24.1, Pages 7-5 to 7-6.

Past hydrologic studies have not conclusively determined that Little Bear Spring is recharged primarily from water losses in Mill Fork Canyon. The pre-1998 studies concurred on only a few points, one of which was that the source area for Little Bear Spring was to the north and west. More recent studies have indicated that there is a component of flow reaching Little Bear Spring from both the north and the south.

The dye tracer study performed in summer 2001 only demonstrated that there is a component of flow from Mill Fork Canyon to Little Bear Spring; a volume of flow cannot be quantified from the study. The Lease Revision should reflect these findings.

14. Mine Plan Area Aquifers, Section 7.24.1, bottom paragraph on Page 7-6 to top of Page 7-7.

Encountering perched (or otherwise isolated) zones of the Star Point sandstone while mining through the coal of the Blackhawk Formation may have little potential for affecting springs in the area that rely on perched water, but it should be kept in mind that the only major spring in the tract is Little Bear Spring. This spring is fault related; it is not related to perched water conditions. If mining contacted a fault supplying water to Little Bear Spring, it could have a direct adverse impact to the water quality and quantity at the spring. A discussion addressing this possibility needs to be included in the Lease Revision.

15. Effects of Mining Operation on Groundwater, Section 7.24.1, page 7-13, first paragraph of the sub-section.

Mine dewatering is probably not the primary mechanism affecting groundwater systems and it is certainly not the only one. This section and the previous one have a seemingly thorough and repetitive description of the existing condition of the regional aquifer and the more localized ones supporting springs and seeps. However, it does not address any consequences associated with subsidence fracturing of the source areas of these springs and seeps. In fact, no information is provided about the probable source areas of these springs and seeps.

16. Mitigation and Control Plan, Section 7.24.1, Page 7-14 and Alternative Water Source Information, Section 7.27, Page 7-29.

When discussing mining related impacts to Little Bear Spring Pages 7-14 and 7-29 of the Lease Revision state, respectively, "Should it be necessary to develop alternate water supplies due to unexpected diminution or interruption of flows as a direct result of mining activities..." and "Mitigation for potential disruption to Little Bear Spring will be accomplished through the construction of a water treatment plant ... if mining activity in the South Crandall lease tract affects the quality or quantity of the spring". These two statements are not compatible with the intent of Special Coal Lease Stipulation #17 which is to ensure an uninterrupted supply of culinary water prior to mining in the two identified areas irrespective of whether mining can be conclusively shown to have affected the spring. Therefore, language should be incorporated in the Lease Revision that is consistent with Stipulation #17 and the understanding of Castle Valley Special Services District.

17. Regional Surface Water Hydrology, Section 7.24.2, Page 7-16, first paragraph of the sub-section.

The statement that "There are no perennial drainages in the proposed South Crandall Lease area" is consistent with the 1997 EA but inconsistent with the 2003 Decision Notice. Page 4 of the Decision Notice points out that there are areas of Little Bear

Creek with riparian vegetation and that these areas are supported by segments of perennial sub-alluvial flow. Thus, Little Bear Creek must be identified as a perennially functioning stream.

18. Mine Plan Area Surface Hydrology, Section 7.24.2, Page 7-17, 2^d paragraph of the sub-section.
Comment #17, pertaining to the perennially functioning status of Little Bear Canyon, also applies to this section.
19. Hydrologic Balance Protection, Surface and Groundwater Protection Plan, Section 7.31.1, Pages 7-26a to 7-27a.
The measures described in detail for mining near the Joe's Valley Fault (pertaining to pilot borings and geologic mapping based upon the data gained from the borings) should also be required for the two buffer zones around Little Bear Spring described in Special Coal Lease Stipulation #17. A sub-surface drilling and geologic mapping program (similar to the one conducted previously to prevent damage to the hydrologic system associated with Joes Valley Fault) was discussed in the Recommendations Section of the Hydrogeologic Interpretation prepared by the Forest Service (South Crandall Tract project file).
20. Probable Hydrologic Consequences Determination, Pages 3, 4, and 5, Appendix 7-15.
Comments #13, #14, #15, and #17 also apply to the hydrologic interpretation in this section.
21. Appendix 7-15, Probable Hydrologic Consequences Determination, Interception, Page 2.
The 600 foot overburden observance and the perennially functioning status of Little Bear Creek needs to be addressed.