

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

January 9, 2005

TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor

THRU: Joe Helfrich, Team Lead

FROM: Wayne H. Western, Environmental Scientist III Engineering and Bonding.

RE: South Crandall Federal Lease (UTU-78953), Genwal Resources Inc., Crandall Canyon, C/015/0032, Task ID #2084

SUMMARY:

On September 16, 2003 the Division received an application from Genwal resources Inc. to modify their mining and reclamation plan to include the new South Crandall Federal Lease (UTU-78953). On December 2, 2003 the Division sent the Technical Analysis document to the applicant as represented by Mr. Gary Gray. The Division received a response to the deficiencies enumerated in the Technical Analysis document on January 30, 2004. On March 18, 2004 the Division sent the Technical Analysis document to the applicant as represented by Mr. Gary Gray. The Division received a response to the deficiencies enumerated in the Technical Analysis document on April 7, 2004. On May 24, 2004 the Division sent a Technical Analysis deficiency response to Genwal Resources. On June 14, 2004 Genwal Resources submitted a response to the deficiencies enumerated in the 5/4/04 technical analysis. On October 5, 2004 The Division staff met with the Forest Service and BLM to discuss the applicants response to the Forest's Service comments provided to the Division on March 4, 2004. On November 4, 2004 the Division sent Genwal Resources a revised TA that included the Forest Service's comments. On Decembr 6, 2004 Genwal Resources submitted a response to the TA. The lease application encompasses 920 acres and can be located on the Rilda Canyon 7.5 minute quadrangle map in The Manti-La Sal National Forest. There is no surface disturbance associated with this lease acquisition. The applicant is currently developing portals adjacent to the existing surface facilities in order to gain access to the coal lease. This memo will include a review of the engineering sections of the submittal dated December 6, 2004.

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TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Affected Area Boundary Maps

The Permittee shows the proposed affected area boundaries on Plate 5-2 (BC). The information is adequate for the Division to determine the affected area boundaries.

Existing Structures and Facilities Maps

The Permittee did not need to update the existing structures and facilities maps. Plate 1-1, Crandall Canyon Mine Lease Map, shows that the area is mountainous and that only structure that exists is a U.S.F.S. trail. Plate 4-3, Crandall Canyon Mine Oil & Gas Development, does not show any activity in the South Crandall lease area.

Existing Surface Configuration Maps

The Permittee shows the existing surface configuration on several maps including Plate 1-1, Crandall Canyon Mine Lease Map.

Mine Workings Maps

No known mine workings exist within the South Crandall lease.

Findings:

The information provided is adequate to meet the requirements of this section of the regulations.

OPERATION PLAN

COAL RECOVERY

Regulatory Reference: 30 CFR 817.59; R645-301-522.

Analysis:

The Division reviewed the mine plan and the BLM approval letter for the resource recovery and protection plan (R2P2). The Division found that the mine plan would maximize economic coal recovery.

The BLM placed the following restrictions:

- Full extraction mining is not authorized in panels BC-4 and HIA-5 in areas with less than 600' of overburden until it is determined that these areas can be mined without adverse impacts to the Little Bear Canyon municipal watershed.
- Mining will not be permitted until the water treatment plant is in operation for those areas identified in lease stipulation 17. At present no mining is scheduled for those areas.

The regional BLM recommended that the R2P2 be approved. A letter from the BLM is in Appendix 5-24. The Division agrees with the BLM's preliminary evaluation the mining plan with respect to maximizing economic coal recovery.

Findings:

The information in this section of the MRP is adequate to meet the minimum requirements of the regulations.

SUBSIDENCE CONTROL PLAN

Regulatory Reference: 30 CFR 784.20, 817.121, 817.122; R645-301-521, -301-525, -301-724.

Analysis:

Renewable Resources Survey

The renewable resources in the area consist of grazing, timber and water. The Permittee stated in the South Crandall amendment that some of the renewable resources in the area were surface and groundwater. The Permittee has designed the mine plan to prevent damage to those resources particularly Little Bear Spring.

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Subsidence Control Plan

The updated subsidence plan includes the following information about the South Crandall lease:

- In most of the South Crandall lease, the Hiawatha and Blind Canyon seams will be extracted by longwall methods. Those areas where full extraction is not permitted by the lease agreement are: 1) Areas under Little Bear Stream with less than 600 feet of overburden, 2) areas within 1,000 feet of the southeast corner of the lease in order to protect the Mill Fork Graben and 3) areas within 1,000 feet of the southern boundary of the lease in order to protect the possible water-bearing fracture system.
- Map 5-2 BC and Map5-2H have been updated to show the area of maximum possible subsidence.
- The subsidence monitoring program for the South Crandall Lease is similar to that of the other areas. The area will have initial survey points established. The area will be aerial surveyed and surface inspections will be done.
- Effects of planned subsidence are anticipated to be a lowering of the surface and temporary tensional fractures at the margins of the subsidence areas.
- Mitigation for any disruption to the Little Bear Spring will be done through construction of a water treatment plant, which will provide replacement water for the spring.

The Permittee did not include adequate information about the main power line for the site and the potential effects of subsidence. The Division needs the following specific information:

- The Permittee must show the location of the main power line on all subsidence maps including but not limited to Plate 5-2 (BC) and Plate 5-2 (H). Those maps have a yellow line that appears to be the powerline but it is not identified.
- The Permittee must update Map 5-5 to show the areas where subsidence has and is expected to occur.
- The Permittee must describe the anticipated effects that subsidence will have on the main power lines. On page 5-26b the Permittee states that the powerline is under 1,500 feet of cover and that they do not anticipate any problems. However, the Permittee did not state how they came to that conclusion.
- The Permittee states that they will monitor the powerlines and take action to minimize damage but they do not state what type of monitoring will be done or what types of action will be taken to minimize damage. At a minimum the Permittee must state what type of monitoring plan will be implemented, what the triggers will be and what action will be taken. The monitoring plan must include an inspection program for the powerline in the event of a power outage.

The Permittee states that they will not do full extraction mining in areas with less than 600 feet of coal. However, those areas are not clearly identified on the map.

For clarity, the Permittee must delete the entire second paragraph on page 5-26B. That paragraph begins with: "It should be noted that neither the Little Bear Spring nor its recharge fault system, is located...".

Due to lease stipulations the Permittee must make the following changes on page 5-9, last paragraph, 3rd sentence. The sentence must be changed to read

"According to this plan full extraction mining (i.e. longwall mining) is not authorized in panels BC-4 and HIA-5 in areas with less than 600' overburden unless it can be determined that these areas can be mined without adverse impacts to the Little Bear Canyon municipal watershed.

The same changes must be made to the notes on Map 5-2(H) and Map 5-2(BC), above panels HIA-5 and BC-4, respectively.

The Permittee must update Map 5-5, Crandall Canyon Mine Subsidence Map to show the changes to the permit areas and any additional monitoring points. The Permittee must also include the cumulative area of maximum possible subsidence. The map must be at a scale of 1:24,000 or larger.

Performance Standards For Subsidence Control

The Permittee is required to keep all performance standards for subsidence controls.

Notification

The Permittee is required to notify the water conservancy district, and all surface owners 6 months before undermining an area. The Division will inspect the Permittee's records to determine if notification was given.

Findings:

The information in the South Crandall amendment does not meet the minimum requirements of this Subsidence Control Plan. Before approval, the Permittee must provide the following in accordance with:

R645-301-525.420 The Permittee must show the location of the main power lines on each subsidence map including but not limited to Plate 5-2 (BC) and Plate 5-2 (H). If the yellow lines on the maps represent the powerline then the Permittee must identify the lines. The Permittee must also update Map 5-5 to show the

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subsidence areas within the entire permit area. The Permittee must also update Map 5-5 to include all areas within the permit boundaries where subsidence has or could take place.

R645-301-525.460 The Permittee must state the anticipated effects of subsidence on the main power line. That information is needed to support the Permittee's claim that subsidence damage will not occur to the powerline. In addition the Permittee must state what type of monitoring they will do for the powerline, the triggers to take action and what that action would be. The powerline plan must include at a minimum an inspection program for the powerline in the event of a power failure.

R645-301-121.200, The Permittee must clearly identify those areas where full extraction mining will not be used. If the Permittee does not know if an area will meet the first mining only criterion they need to show estimated areas.

R645-301-121, The Permittee must remove the entire second paragraph on page 5-26b. That paragraph begins with: "It should be noted that neither the Little Bear Spring nor its recharge fault system, is located....".

R645-301-121.200, The Permittee must make the following changes to page 5-9, last paragraph, 3rd sentence. According to this plan full extraction mining (i.e. longwall mining) is not authorized in panels BC-4 and HIA-5 in areas with less than 600 feet of overburden unless it can be determined that those areas can be mined without adverse impacts to the Little Bear Canyon municipal watershed. The same changes must be made to the notes on Map 5-2(H) and Map 5-2(BC), above panels HIA-5 and BC-4, respectively.

R645-301-525.420 and R645-301-525.490, The Permittee must update Map 5-5 to show the location of the permit boundaries, the cumulative area of maximum possible subsidence for all seams and the map must be at a scale of 1:24,000 or larger.

RECOMMENDATIONS:

The Division should deny the amendment until all the above-mentioned deficiencies are adequately addressed.