

United States
Department of
Agriculture

Forest
Service

Manti-LaSal
National Forest

599 West Price River Dr.
Price, Utah 84501

Reply to: 2820

Date: October 17, 1988

Lowell Braxton
State of Utah Natural Resources
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

RECEIVED
OCT 20 1988

**DIVISION OF
OIL, GAS & MINING**

RE: Five -Year Permit Renewal Responses, Crandall Canyon Mine,
ACT/015/032, Folder #2, Emery County, Utah

Dear Lowell:

We have reviewed Genwal Coal Company's 5-year Permit Renewal response sent to our office by the Division on August 16, 1988, and the update sent to our office on September 14, 1988. We previously commented to the original 5-year Permit Renewal in our letter to your office, dated June 1, 1988. A copy of the June 1 letter is attached for reference.

As indicated in the left margin of the attached copy of our June 1 letter, items 5, 10, 11, 26, 30 and 31 have been adequately addressed. Items 7, 9 and 27 are only editorial. The remaining items require a response. If the Division feels that the remaining items have been addressed, please respond and we will be glad to consider your comments in resolving the related concerns.

We have the following additional comments on Genwal's responses:

1. Section 3.2.10, Pg. 3-10, Paragraph 3

In this paragraph, the PAP states, "This road is addressed in Item 11-1." The reference is incorrect. The road is addressed in Item 2-3.

2. Section 3.5.5.2, Pg. 3-38

The introduced species in the seed mixes have been removed at DOGM's insistence and were replaced by other species; some of which are native to parts of Utah, but not to the Wasatch Plateau. Please reference our comments on the seed mix which are included as Item 12 in our June 1 letter.

The second paragraph on page 3-29 (2/10/88) which explains the justification for the use of the introduced species, which were agreed to by OSM and the Forest Service for approval of the original mine plan, has been removed in the August 8, 1988, revision (page 3-38). This renders paragraph 3 on page 3-38 incorrect and unjustified. This statement says that the seed mix in the mine plan is agreed to by the Forest Service and has been used successfully elsewhere.

We object to the revised seed mixes and will not consent to the 5-year plan until it is revised and agreed to by both DOGM and the Forest Service.

3. Plate 3-4

To comply with the Division's comments, the cross sections have been revised to show the undisturbed, existing and proposed reclamation status contours. The cut and fill volume calculations presented in Item 3-12 indicate a shortage of 11, 110 yd.³ for reclamation. The cross sections on Plate 3-4 do not tie to the cut and fill volumes. Cross sections A and C do not extend to natural ground on the right. Volumes and the cross sections need to correlate, and volume figures for the cross sections should be provided.

4. Section 3.3.5.2, Pg. 3-16

The Division's comments regarding UMC 784.11 state that this section should be updated to discuss the gate across the Class III road leading to the explosives magazine as originally shown on Plate 3-1. Genwal's response (8/8/88) was to eliminate the gate from Plate 3-1. The Class III road leads to the powder magazine from a public road and parking area administered by the Forest Service. For safety reasons, the gate should be constructed as originally shown.

5. Section 12.4.4, Pg. 12-13 (See DOGM's May 3, 1988, Comments UMC 784.20)

Genwal has committed to a subsidence monitoring program independent of the Forest Service program which was discontinued.

As required in Special Stipulation (Section 31) No. 11 on Federal Coal Leases SL-062648 and U-54762, the lessee/operator must also commit to monitoring of vegetation changes in the mined areas in conjunction with subsidence and hydrologic monitoring. The monitoring system shall utilize techniques which will provide a continuing record of change-over time and an analytical method for location and measurement of a sufficient number of points over the lease. As incorporated into the Forest Service/Genwal program, this was done by taking aerial color infrared (CIR) photographs of the area at specified intervals of time for comparison and analysis of any changes. An interval of once every five years to correspond with the 5-year submittals should be sufficient. Color infrared photography of the lease and permit area has

already been completed for baseline and Genwal has incorporated vegetation information for the permit area in the mine plan from this photography. We feel that CIR aerial photography is the most efficient and economic method for completing this monitoring.

6. Chapter 12 - General

As stated in several comments on Chapter 12 in our June 1 letter, Genwal does not provide adequate data on the proposed mining configuration nor adequate geotechnical data to determine if mining, as proposed, is likely to cause slope/escarpment failure. Significant mining-induced failures along the west slope of Huntington Canyon would be unacceptable.

Genwall must provide adequate technical data to show that their mining operation and resulting subsidence will not significantly decrease slope stability. Before the PAP can be approved by the Forest Service, there needs to be a joint determination by the Division, BLM and the Forest Service that the risk of causing instability is within acceptable limits.

Please convey our comments to the operator in conjunction with the Division's comments. If you do not concur with any of our comments, please contact the Forest Supervisor's Office in Price, Utah, so we can resolve the related concerns.

Sincerely,



for
GEORGE A. MORRIS
Forest Supervisor

Enclosure

United States
Department of
Agriculture

Forest
Service

Manti-LaSal
National Forest

599 West Price River Dr.
Price, Utah 84501

Reply to: 2820

Date: June 1, 1988

Lowell Braxton
State of Utah Natural Resources
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Lowell:

We have reviewed the Five-Year Mine Plan Submittal, Genwal Coal Company, Crandall Canyon Mine, ACT/015/032, Emery County, Utah, and your review response sent to Genwal Coal Company on May 3, 1988. We agree with the Division's comments and will not reiterate those comments in this letter. Our comments are as follows:

1. Section 2.5, Pg. 2-7

The Ferron-Price Land Management Plan, Manti-LaSal National Forest, 1979, is referenced. Page 149 of this document is included as item 2-17 in regard to unsuitability criteria. This plan has been superseded by the Manti-LaSal National Forest Land and Resource Management Plan (LRMP), November 5, 1986. The reference and information must be revised accordingly. Appendix C of the LRMP discusses application of the unsuitability criteria on a Forest-wide basis. The criteria were applied to the leases during evaluation of Genwal's leases and the included lands were determined to be suitable for leasing. This was discussed in the leasing Environmental Assessments.

The LRMP is also referenced and discussed in Chapter 4, Land Use. Revisions are needed in this section to be consistent with the plan. They will be discussed later in this letter under Chapter 4 comments.

2. Item 2-1

The attached copy of Federal Coal Lease U-54762 is not complete. The complete copy must be attached.

3. Item 2-4

Stipulation 12 in Section 31 of Federal Coal Lease SL-062648 has been deleted. This needs to be corrected.

The off-lease sediment pond was authorized by a Forest Service Special-Use Permit. Only the application for this permit is attached. The entire permit which was issued on July 28, 1983, should be included. This was the authorization used by DOGM to include the facility into the permit area.

4. Item 2-7

See comments in Comment No. 1 above.

5. Section 3.2.7, Pg. 3-9

The last sentence states that the proposed sewage facility for the proposed bathhouse can be found in Appendix 3-XXX. There is no Appendix 3-XXX and no information on sewage disposal is presented. The sewage system must be approved by all agencies involved, including the Forest Service.

6. Section 3.2.10, Pg. 3-10

The Division's comments (UMC 817.150-.176) require that Genwal submit authorization from the Forest Service stating that the Crandall Canyon Road (Forest Development Road 50248) and the Forest visitor parking area may remain as post-mining facilities.

Since these facilities are on the Forest Road System and there is a post-mining need for them, the Forest will require that they remain. However, the facilities must be partially reclaimed to be consistent with the anticipated post-mining use. This will involve a reduction in the width of the road.

The Forest will provide Genwal with the standards required for the post-mining road and parking area and an authorization for retaining the facilities.

7. Section 3.2.13, Pg. 3-11

The detailed construction schedule addresses the already existing facilities in the future tense and does not include the new proposed facilities such as the truck-loading facility and bathhouse. These should be addressed.

8. Section 3.3.9.1, Pg. 3-18

The plan states that the sediment pond sludge will be temporarily stored at the west end of the coal stockpile for drying prior to disposal underground. At such time it will be tested for any toxic materials. The drying was initially required prior to disposal at the Sinbad landfill.

ok 8/8/88 revision.
Platt 3-14
CR

Editorial

The Division's comments (UMC 784.19) require that the sediment pond sludge and underground development waste must be permanently disposed of on-site. Storage of the sludge for drying at the west end of the coal stockpile and working area is not acceptable. There is not enough room at this location and the water will drain across the working area to the diversion ditch, causing tracking of coal and mud throughout the area. Since disposal on-site is required, temporary storage would not be required for drying. If feasible, the sludge should be directly transported underground from the pond, eliminating two stage handling. In addition, the sludge should be tested in-place at the pond for toxic materials. If toxic materials are present, an alternative off-Forest disposal must be proposed, and is subject to prior approval.

We object to disposal of oil-contaminated materials and toxic or hazardous substances on the Forest.

9. Section 3.4.1.1, Pg. 3-21

Editorial
This needs to be reworded. The portal facilities lie within the MMA (Leasable Minerals Area) Management Unit. The area was specifically delineated in the LRMP for coal development in this area and management emphasis is on leasable minerals development. The acreage as discussed in the MRP, has not been withdrawn from current land status as stated. Once the mine area is reclaimed, the lands will be returned to the pre-mining land uses which include range, wildlife and recreation.

10. Section 3.4.6.1, Pg. 3-23

ck 8/8/88
CR
DWR Comments (UMC 783.21). We agree with DWR's comments for this section.

11. Section 3.4.6.2, Pg. 3-24

ck 8/8/88 Revision
CR
In paragraph 3, Genwal states that no information can be obtained on moose wintering habitat. According to the DWR, the habitat information has been given to Genwal and needs to be addressed in the MRP.

)
Guzzlers which will be constructed for the purpose of mitigating water loss at springs important for wildlife must also meet design requirements of the Forest Service.

12. Section 3.5.5.2, Pg. 3-35 through 3-41

- a. Temporary Seed Mix - Mountain brome and Russian wildrye grass should be replaced by smooth brome and orchard grass. If seeding has not taken place or if reseeding becomes necessary, the revised seed mix with these species must be used. The topsoil stockpiles are not on-lease nor within the permit area and are authorized under a Forest Service Special-Use Permit.

b. Mix No. 1

Bromus marginatus is now *Bromus carinatus* in all of the flora books. See page pp-707, Utah Flora.

Replace mountain brome (BRCA) with smooth brome and add orchard grass (2 lbs./acre), Timothy (1 lb./acre), and meadow foxtail (ALPR) (1 lb./acre) to the mix.

c. Mix No. 2

Add smooth brome and crested wheat or intermediate wheat (1-2 lbs./acre).

d. Mix No. 4

Mountain brome is now *Bromus carinatus*. Use only 2 lbs./acre of mountain brome. Add orchard grass, intermediate wheat, and blue wildrye (*Elymus glaucus*) to the mix.

The plant species which need to be replaced, as discussed above, are very expensive and are probably not available.

The introduced species that were used successfully on the Mt. Pleasant watershed, Ephraim watershed, and Great Basin Experiment Station are mostly smooth brome, intermediate wheat, slenderwheat, orchard grass, meadow foxtail and Timothy. Only slenderwheat is maintained in the seed mixes.

The native species listed in the seed mixes may become established on these sites without seeding them. They are present around the area and will eventually invade the sites.

Most of the native species proposed in the mixes are classed as mid to late seral type species. Introducing them into a very early seral site results in a very poor establishment of these species. The non-native introduced species are more adapted to harsh disturbed sites, establish well and maintain and improve the site so the native species can be established.

13. Section 3.3.1.4, Pg. 3-12

The Forest Service is very concerned that the escarpments of Huntington and Crandall Canyon be protected from mining-induced escarpment failure. We will request that the BLM review the Operating Plan and make a determination as to whether the plan provides for protection of the escarpments as required in Section 31, Stipulation 12 of Lease SL-062648 and Section 12, Stipulation 13 of Lease U-54762.

There is not adequate information on the projected mining in U-54762 to be able to make a determination on escarpment failure potential. Genwal must provide adequate protection of the escarpments and must include the information required for evaluation of the mining plan and protection measures.

14. Section 4.3.1, Pg. 4-3

Plates 2-1 and 3-1 show the private lands owned by ARCO and the Federal coal leases. The plates should also identify the leased and contiguous lands as National Forest System lands.

15. Section 4.3.1.1, Pg. 4-3

The first paragraph should be revised to state that the surface of the lands are National Forest System lands administered by the Manti-LaSal National Forest.

16. Section 4.3.1.3, Pg. 4-3

The last sentence referring to renewable resources should be deleted or expanded. There are many other renewable resources in the area, not just range and wildlife. Range, wildlife and recreation are the primary pre-mining land uses, but there are many other renewable resources such as water, timber, minerals, etc.

17. Section 4.3.1.4, Pg. 4-4

This section is not properly stated and needs to be revised. Genwal has obtained a road-use permit for reconstruction and use of the Forest Service Crandall Canyon Road (FDR 50248). In addition, three Forest Service Special-Use Permits have been issued. One involves use of the Forest Visitor Parking Area (on-lease) for storage of snow in the winter. Two other Special-Use Permits have been issued for off-lease uses. They include the sediment pond and the topsoil stockpiles. The sediment pond area has been added to the permit area, but the soil stockpiles have not. Only that portion of the Forest Development Road which lies within the disturbed area is included within the permit area.

The Special-Use Permit issued on July 28, 1983, for the sediment pond should be added to Item 2-3. At the present time, only the Special-Use Permit application for this permit is included.

18. Section 4.3.2, Pg. 4-4

This section references Plates 2-1, 3-1 and 4-1. In general, the boundaries shown on the maps are not complete and consistent. Specific comments are as follows:

a. Plate 2-1

Lease U-54762 is incorrectly numbered U-054762 on this plate and at many other locations.

The plate incorrectly shows a small area in the southwest corner of lot No. 8, Section 5, as a detached, isolated portion of Lease U-54762.

b. Plate 3-1

It is very difficult to track which off-lease facilities are included in the permit area. The lease and private surface boundaries should be shown.

The southern disturbed area boundary is not shown and the disturbed area does not include the drainage diversions.

This was added but other concerns not resolved.

The permit area boundary is not complete in the southwest corner of the plate.

19. Section 4.4.2, Pg. 4-5

This section needs to refer to the Manti-LaSal National Forest Land and Resource Management Plan, 1986, and discuss Forest Service management for the area.

The permit area includes four separate management units. The management units are as follows and management emphasis for each unit is described:

The bottom of Crandall Canyon is included in the MMA (Leasable Minerals Area) Management Unit where management emphasis is on leasable minerals development. This unit includes the surface facilities for the mine.

The eastern portion of the permit area lies within the GWR (General Big-Game Winter Range) Management Unit where management emphasis is on providing general big-game winter range.

The north and west areas of the permit area lie within the RNG (Range Forage Production) Management Unit. Management emphasis is on production of forage and cover for domestic livestock and wildlife.

The riparian area along Crandall Creek is included in the RPN (Riparian) Management Unit. RPN areas include the aquatic (including fish) ecosystem, the riparian (characterized by

distinct vegetation), and adjacent ecosystems that remain within approximately 100 feet measured horizontally from the edge of all perennial streams and springs, and the shores of lakes and other still water bodies, i.e., from seeps, bogs, and wet meadows. Emphasis is on preservation of the riparian areas and component ecosystems.

In the third paragraph, wildlife use and livestock trailing are not discussed as present uses.

20. Section 6.4, Pg. 6-4

There are inconsistencies in the discussion of how many formations are exposed within the permit area. This needs to be corrected. In addition, Figures 7-1 and 6-1 are not consistent as to the formations which are exposed within the permit area.

21. Section 6.5.3, Pg. 6-8

Item (1) states that the flow of ground water is toward Huntington Creek. This cannot be correct regionally since the rocks dip to the west. Locally some water may, however, flow towards Huntington Creek due to fractures. Surface water drains to Huntington Creek. This section needs to be clarified.

22. Section 7.1.4, Pg. 7-34

This section states that barrier pillars will protect Huntington and Crandall Canyons from escarpment failure. The Forest Service will not consent to approval of this permit until BLM and DOGM have conducted a technical review and confirm this statement. Written documentation of this determination will be needed.

23. Section 7.2.1.3, Pg. 7-48 and 7-50

The calculated safety factor should be listed with a reference to the calculations in the Appendix.

24. Section 7.2.3.1, Pg. 7-55

Genwal has stated that they will determine the minimum instream flow needs for Crandall Canyon in consultation with the Forest Service. This information will need to be incorporated into the M&RP when it is determined, with a commitment from Genwal Coal Company that the minimum flows will be allowed to pass their point of diversion when water is diverted for mine use. The Forest Service minimum instream flow claim should be listed in Table 7-6, Pg. 7-56.

*It is listed
at other locations
but not here*

25. Section 7.2.3.2, Pg. 7-68, 69

Since SAE-2 can be drained to the sediment pond, this should be required if the sediment pond can accommodate the additional volume.

26. Section 7.2.5, Pg. 7-72

*OK 8/8/88
revision*
CR

This section must be revised. Even though impacts are expected to be minimal, Genwal must make a commitment to mitigate damages or loss of water in the event that they occur.

27. Section 8.1, Pg. 8-3

*Not critical
Just Editorial*

This discussion is quite restrictive and should relate more to objectives. Briefly discuss the reasons for collecting soils data and how the soils will be managed and why.

28. 9.3.2.6, Pg. 9-4

Only the symbols for the community types are listed. There should be a reference or footnote correlating the plant community names to the appropriate symbols.

29. Table 3-G, Pg. 34

Festuca pratensis should be changed to *Festuca poatensis*.

30. Section 10.3.2.3, Pg. 10-4

*OK 8/8/88
revision*

The statement in the first paragraph in this section that elk and deer migration occurs with no specific corridors is incorrect and conflicts with Item 10-3, Pg. 52.

31. Section 10.4, Pg. 10-6

*OK 8/8/88
revision*

The statement that Crandall Creek has been determined not to be a fishery is incorrect. This has been documented in DOGM's and DWR's comments sent to Genwal on May 3, 1988.

32. Section 12.3, Pg. 12-2

This section does not show adequate information on the proposed mine workings or structure of the overburden to adequately determine if escarpment failure will occur. Plates 3-2 and 3-3 are not adequate for this purpose.

33. Section 12.3.1, Pg. 12-4

In paragraph 3, it is stated that the regional dip is 1-3 degrees westward. What is the general dip within the permit area. Is it consistent with the regional dip.

34. Section 12.4.2, Pg. 12-8

Paragraph two states that vegetative resources will not be negatively impacted by subsidence so that the current land use is expected to continue. This statement is not substantiated by any referenced or derived data and analysis. We agree that the pre-mining land uses will probably continue but there could be changes in vegetation due to changes in ground water from subsidence. This statement must be substantiated or revised.

This section left out recreation as a land use. If escarpment failure occurs, recreation and visual quality would be affected.

35. Section 12.4.2, Pg. 12-9 through 12-11

The northeast corner of Lease U-54762 is very close to Huntington Creek. There is no discussion on how Huntington Canyon will be protected from escarpment failure.

A BLM, FS, and DOGM determination that the escarpments and drainages will be adequately protected must be made and documented before the Forest Service will consent to the 5-year permit.

36. Section 12.4.2, Pg. 12-12

In paragraph two, it is stated that horizontal movement which would create slope failure is not expected to occur due to subsidence along the escarpment because only limited coal outcrop occurs within the lease. There is no reference to substantiate that horizontal movement will not occur and Plate 6-1 shows that there is approximately 7000 lineal feet of outcrop in the permit area. This is significant.

37. Section 12.4.3, Pg. 1-12

If escarpment failure occurs, or if significant impacts result from subsidence, Genwal will be required to mitigate the impacts. Any loss of livestock or structures, such as the roads, must be compensated as stated.

If there is sufficient evidence that the damages to be compensated were due to mining, the burden of proof that the damages were not due to mining would be the responsibility of the operator.

This section needs revision.

38. Item 12-5

The subsidence plan has been revised and updated. The copy attached should be replaced with the updated version which has been provided to Genwal Coal Company.

If you have any questions on the comments, please contact the Forest Supervisor's Office. Resolution of some of the items discussed will require coordination between the Forest Service, Division of Oil, Gas and Mining, and the Bureau of Land Management.

Please send us a copy of the draft Environmental Assessment/Technical Analysis for review.

Sincerely,

/s/ Ted V. Fitzgerald

for
GEORGE A. MORRIS
Forest Supervisor

cc:
BLM - Moab District
D-3
C. Reed^v