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Norman H. Bangerter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

February 28, 1991

Mr. Dan Guy, Manager
Beaver Creek Coal Company
P.O. Box 1378
Price, Utah 84501

Dear Mr. Guy:

Re: Technical Deficiencies, Federal Lease Tract, Beaver Creek Coal Company, Trail Mountain #9 Mine, ACT/015/009, Folder #2, Emery County, Utah

Enclosed please find a copy of the technical deficiencies for the Federal Lease Tract and a copy of the Forest Service comments. Any concerns must be completely and adequately addressed before the technical analysis can proceed.

Sincerely,

Pamela Grubaugh-Littig
Permit Supervisor

jbe
Enclosure
cc: "A" Team
AT015009.1

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United States Department of Agriculture | Forest Service | Manti-La Sal National Forest | 599 West Price River Dr. Price, Utah 84501

Copy Susan, Jose, Tom, Dave Dad Pam

Reply to: 2820

Date: February 22, 1991

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

RE: Federal Lease Tract Addition, Beaver Creek Coal Company, Trail Mountain #9 Mine, ACT/015/009, Folder #2, Emery County, Utah

Dear Lowell:

We have reviewed Beaver Creek Coal Company's responses to our initial comments on the Federal tract addition (Forest Service letter to the Division, dated October 5, 1990). The numbers on the comments below correspond with Forest Service comments and Beaver Creek Coal Company's responses.

1. Chapter 3, Operating Plan

   The operator states that a more detailed mining plan will be submitted for the PAP once they receive approval of the Resource Recovery and Protection Plan (R2P2) from BLM. Before the Forest Service can effectively cooperate on preparation of the EA/TA and consent to the PAP, the mine plan must be complete and demonstrate that mining will be done in conformance with lease stipulations. In addition, the Forest Service must receive confirmation from the BLM that the R2P2 is in conformance with lease stipulations and is designed to prevent unnecessary impacts to surface resources.

2. Section 3.3.2.2, Protection of Surface Structures and Streams

   In response to this item, the operator revised the text to recognize that Forest Development roads and trails, watershed treatments, and stock ponds overly the mine area. A commitment for repair of these structures if they are damaged by mining has been made in the text. The narrative is adequate, however, the structures must be identified on the Land Use Map 4-3 or another map as structures which need to be monitored and repaired if damaged.

   The operator revised the text to state that a spring inventory will be done in 1991. However, water rights are not discussed. The operator needs to identify all water rights and water rights claims which lie within and adjacent to the permit area. This information is required and will help in locating springs. Along with the statement that a spring inventory will be completed in 1991, the operator needs to commit to monitoring additional springs identified during the 1991

survey, if required by the surface management agency and the Division. The Forest Service inventory of springs shows that there are additional developed springs in the permit area which need to be surveyed and, if found during the 1991 survey, will need to be monitored.

The operator has committed to determine if the drainages in the permit area are perennial or intermittent. In addition, a commitment was made to protect the drainages if they are determined to be perennial. As discussed in comment No. 1 of this letter, the mine plan must reflect this commitment as required in lease stipulations.

3. Section 4.4.2 Mine Plan Area Land Use

The Manti-La Sal National Forest Land and Resource Management Plan, 1986 has been referenced as required in this comment. The watershed treatments (WPE Management Unit) must, however, be shown on Land Uses Map 4-3.

4. Section 6.5.1 Exploration and Drilling

The correction has been made and this comment has been adequately addressed.

5. Section 6.5.5.1 Reserve Calculations

The operator has stated that the Hiawatha seam isopach map (Figure 6-7) is confidential and is therefore not included in the package. Since the Forest Service does not need this information for evaluation, this comment has been adequately addressed.

6. Section 6.7.2 Local Formations Structure

This comment has been adequately addressed.

7. Chapter 7 Hydrology

This comment has been adequately addressed.

8. Section 7.1.3.1 Regional Groundwater Hydrology

The operator has committed to conduct a spring survey in 1991. However, as discussed in item 2 above, the operator needs to identify water rights and water rights claims and needs to commit to monitoring additional springs identified during the 1991 survey if required. The water rights need to be shown on the spring and surface water maps with a list and discussion in the text.

A spring has been developed by the Sportsman's Lodge as a culinary water source under a Forest Service special-use permit in Joes Valley. This spring lies down-dip of the mine between the tract and the Joes Valley Fault. If the operator does not think that this spring will be affected, a discussion is needed to justify this statement. Even if it is not anticipated that the spring will be affected, it needs to be inventoried, monitored and identified for replacement of water in the event that it is impacted by mining.

9. Section 7.1.6.1 Alternative Water Supply

The reference has been corrected as required. The operator has committed to monitoring and repair of pond 35-1P, if it is damaged. This is acceptable but it must be clear that all such ponds must be repaired if damaged. The commitment for monitoring and repair of ponds is not limited to just this pond.

The commitment for replacing water is generally acceptable, however, the statement on water replacement is not clear. We suggest that the second sentence on page 7-15 be changed to read as follows: "Repair of damaged water sources and structures and the methods for replacement of water will be subject to approval by the surface management agency, the water rights owners and the Division".

10. Section 7.1.5 Effects of Mining on the Groundwater Hydrologic Balance

The operator responded to this comment by adding a reference to Section 6.7.2 which states that there will be increased flow in the mine but there will be no impact to the net flow in Straight Canyon below the reservoir because the mine water will be discharged into Cottonwood Creek. The operator fails to recognize that the interception of ground water and discharge into Cottonwood Creek could potentially decrease flow in Straight Canyon between the reservoir and the confluence with Cottonwood Creek. Estimates of the amount of water which could be encountered and discharged into Cottonwood Creek (increasing flow) and the potential for decreasing flow in Straight Canyon must be addressed.

On page 7-12 it is stated that only two springs [T-10 and T-14] were found within the area of potential subsidence. This statement is not accurate. Map 7-2 shows several additional springs and a pond. This section needs to be revised. In addition, the 1991 spring survey will likely identify several more springs. The Forest Service inventory shows at least two additional developed springs.

Page 7-13 needs to be revised in regard to the reference to the two springs discussed above.

11. Section 7.2 Surface Water Hydrology

The operator has committed to study and protect the drainage which is located on the lease, however, the potential for surface water changes has not been adequately addressed.

The potential impacts to Straight Canyon due to dewatering and the increase in flow to Cottonwood Creek need to be addressed. The amount of potential increase in mine water discharge needs to be assessed so that it can be determined how much additional flow could occur in Cottonwood Creek.

12. Chapter 8 Soil Resources

The Forest Service will provide the operator with a soil map and a narrative describing the soils in the permit area. The soils information should be included into the PAP to complete the inventory of surface resources above the mine area.

13. Chapter 9 Vegetation Resources

In an effort to comply with this comment and the lease stipulations, the operator submitted a range analysis map of the Trail Mountain Cattle and Horse Allotment map obtained from the Forest Service. This map shows only vegetative cover type and a range condition rating. This map does not meet the requirements of the lease stipulations. The cover types need to be converted to plant community types. For example, map type 9 could be converted to a Pinyon/Juiper-Snowberry/Salina wild rye grass community. In addition, there has been aerial photo coverage of this area which can be used.

The operator needs to make a commitment to monitor the vegetative communities to determine if mining and subsidence have caused any changes to the community boundaries at five year intervals and to report this information in the 5-year renewals.

If the operator needs help in delineating the vegetative communities, he should contact Bob Thompson of the Forest Service in Price, Utah.

The Forest Service has determined that there are no listed Threatened, Endangered or Sensitive plant species in the lease area. This needs to be stated in the PAP.

14. Chapter 10 Fish and Wildlife Resources

The operator responded to this comment by adding the Wildlife Use Map (Figure 10-4). The map shows wildlife use areas and raptor nest locations as required. The map provides needed information, however, a narrative discussion is needed to explain the information and discuss the source and when and how this information was compiled. The fishery in Straight Canyon also needs to be discussed.

15. Section 12.4.2 Subsidence Experience Over Coal Mines

This comment as follows has not been adequately addressed:

The Bureau of Land Management (BLM) and Forest Service (FS) used a 22 degree angle-of-draw to evaluate the potential for inducing escarpment failures during preparation of the tract delineation report and environmental analysis. The PAP discusses a 15 degree angle-of-draw. The PAP does not provide adequate information to substantiate that the average angle-of-draw will be 15 degrees.

16. Section 12.4.3 Subsidence Effects and Control

The operator has adequately addressed a portion of the comment. The remaining portion of the original comment which has not been adequately addressed is as follows:

The stability of the canyon slopes below the mine area and the safety of travelers along the highways in Straight and Cottonwood Canyons is of utmost importance considering the vertical nature of the canyons slopes and existing instability. The operator must address the

potential for mining/subsidence to induce escarpment failures or dislodge rocks onto the roadways in Straight and Cottonwood Canyon and demonstrate that adequate measures will be taken to prevent mining induced escarpment failures or landslides and provide for public safety.

17. Section 12.4.4 Subsidence Monitoring

The operator has not addressed this comment. It is as follows:

The proposed subsidence monitoring plan is not adequate. Survey monuments must be strategically located and there must be enough data points to measure and determine the angle-of-draw and maximum subsidence. If landslides or escarpment failures occur in Straight and Cottonwood Canyons, there needs to be adequate monitoring information available to determine if they were induced by subsidence. This could be done by installing laser prisms on the canyon rim which could be read from the canyon bottom or other locations not affected from subsidence.

The subsidence plan needs to include survey monuments well beyond the panels in the areas where subsidence will occur to determine the angle-of-draw. The amount, extent and angle-of-draw might be different along the escarpment area due to the lack of buttressing forces.

In addition to measured survey data, an annual reconnaissance of the mined area is necessary to locate, map and describe any observable surface indications of subsidence. This information needs to be included in the annual subsidence report.

The existing MRP is referenced in regard to the subsidence monitoring plan. The MRP discusses the Forest Service/Mine Operator photogrammetric monitoring program which has been discontinued. The MRP/PAP need to describe the current subsidence monitoring program which is being conducted in the existing mine area and the new lease (See comments in the March 6, 1990 letter to the Division from the Forest Service in regard to the 5-year renewal).

Please contact Aaron Howe or Carter Reed at the Forest Supervisor's office in Price, Utah to coordinate the above actions. The soil information discussed in item 12 will be sent directly to the operator for incorporation into the PAP.

Sincerely,

Aaron L Howe

for
GEORGE A. MORRIS
Forest Supervisor

cc:
Richard Holbrook/Floyd McMullen
D-2
C.Reed
Gene Nodine
Dan Guy

Technical Deficiencies
Trail Mountain #9 Lease
ACT/015/009
March 1991

R614-301-100 GENERAL CONTENTS (SW)

R614-301-117.200 Proof of publication of the newspaper advertisement must be made part of the application no later than 4 weeks after publication.

R614-301-300 BIOLOGY (SW)

R614-301-322.100 In consultation with the Division of Wildlife Resources and U.S. Fish and Wildlife Services, the Division requires the permittee to provide a map with raptor nest locations which is suitable for overlay onto the mining sequence map.

R614-301-322.220 In accordance with the Forest Service comments, please provide a discussion on any new wildlife information shown on Figure 10-4 which has not been previously discussed in the permit. The fishery in Straight Canyon must also be discussed.

R614-301-323.400 The permittee must provide a vegetation map of the permit area at a scale of 1:6000. The vegetation map must show plant community types. Any new communities not identified in the original permit must be accompanied by a narrative.

R614-301-358.100 Please make a statement as to the existence of threatened and endangered plants within the proposed lease area.

R614-301-400 LAND USE (SW)

R614-301-411.110 As stated by the Forest Service, all land use structures must be identified on Map 4-3.

R614-301-500 ENGINEERING (JK & DWD)

R614-301-512.140 (JK) Maps 7-9 and 7-9A must be certified by a qualified, registered, professional engineer or land surveyor.

R614-301-512.150 (JK) Maps 6-4 must be certified by a qualified, registered, professional engineer or land surveyor.

R614-301-512.100 (DWD) The applicant must submit certified maps. Figure 12-6 is neither certified or identifies a scale. Some of the proposed monitoring stations should be centralized over the mine panels to identify areas of maximum subsidence. Staggering of some of the monuments will help identify maximum subsidence areas.

The applicant must establish a mine map and subsidence monitoring map at a scale of 1 inch equals 1000 feet so that this map can be overlaid with the overburden, geology and hydrology maps to identify potential impacts.

R614-301-600 GEOLOGY (DWD)

R614-301-612 The applicant must certify Figure 4-10.

R614-301-624.310 The applicant must submit a coal seam isopach map for the lease area to be used in calculating potential subsidence impacts.

The applicant must submit and identify all drill holes on and adjacent to the lease area, submit lithologic logs and cross-sections to identify subsurface geology. All information pertaining to coal reserves and drilling information will be held confidential.

R614-301-700 HYDROLOGY (TM)

R614-301-725 The operator has not addressed the following issues related to the mining of the Federal lease Tract Addition and will need to supply the following information prior to permit approval.

Hydrologic information needs:

1) Water Rights and Water Rights Claims which lie within or adjacent to the permit area.

2) If the operator has not identified all springs within the lease area or adjacent area and has not completed baseline monitoring for all water resources for two years prior to permit approval, this information must be provided.

The operator must verify the water resources identified in the Forest Service's comment #8, February 22, 1991, letter to the Division (i.e., the culinary water source under a Forest Service special - use permit in Joe's Valley by the Sportsman's Lodge).

In addition to verification and monitoring of all water resources within and adjacent to the permit area, all springs must be identified for geologic occurrence (i.e., formation, fault, any other pertinent information).

3) A determination of perennial or intermittent drainage within the permit area and adjacent area must be made and a protection plan presented regarding all perennial drainage potentially impacted by mining.

4) No discussion has been attempted regarding the potential for encountering ground water associated with the syncline shown to skirt the Northwest corner of your permit area. This syncline has produced vast amounts of ground water in the PacifiCorp, Deer Creek Mine, and has as much or more potential due to potentiometric surface and gradient in your lease. Please verify this potential resource either with drill hole data or some other form of conclusive evidence or data.

R614-301-727 The operator must change the reference (page 7-15) to water replacement in the plan to read as follows: "Repair of damaged water sources or structures and the methods for replacement of water will be subject to approval by the surface management agency, the water rights owners and the Division."

The suitability and availability of alternative water supplies or rights must be addressed in the PAP.

R614-301-728 All aspects of this rule must be addressed regarding the potential impacts associated with the interception of groundwater in mine and its impacts on the hydrologic balance of the area. The operator has failed to address the potential for mine water discharge and how much additional flow could occur in Cottonwood Creek, if significant mine water flows are encountered while mining the new lease.

R614-302-300 SPECIAL AREAS OF MINING (HS)

R614-302-321 According to the Office of Surface Mining, Reclamation and Enforcement, Draft Reconnaissance Maps to Assist in Identifying Alluvial Valley Floors, Central Utah (Nimick, Rasmussen, Schmidt, Rusmore, June 1985) the following areas contain either surface irrigated site, subirrigated sites and/or potentially irrigatable sites: T18S R7E Section 7, 8, 9, 10; and T17S R6E Section 5, 7, 8, 17, 18, 19, 20, 29, 30. Therefore, subsequent to the Probable Hydrologic Consequence Report conducted by BCCC, the operator must address in accordance with this section, the existence of Alluvial Valley Floor(s) (AVF) and the possible mining effects on all identified AVF(s).

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