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Reply to: 2820

Date: January 7, 1991

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DIVISION OF
OIL, GAS & MINING

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: Responses to Initial Completeness Review, Rilda Canyon Lease Tract, Pacificorp Electric Operations (Utah Power and Light Company) ACT/015/018, Folder #2, Emery County, Utah

Dear Lowell:

We have reviewed the responses and new materials submitted to the Division on October 15, 1990. This letter contains our comments on the new materials and discusses whether or not Forest Service comments presented in our April 17, 1990 letter have been adequately addressed.

1. The operator has deleted any references to new surface facilities which will be proposed in the future. It is now clear that the proposal only includes addition of the Rilda Canyon leases to the permit area and that no new surface facilities are proposed at this time. The concerns identified in our April letter which are specific to a proposal for new surface facilities in Rilda and Meetinghouse Canyons have been addressed and will again be considered when the operator submits a mine plan amendment proposing them.

2. The mining plan proposes longwall mining under the steep canyon escarpments and Castlegate Sandstone outcrops where mining in other areas with similar conditions has induced escarpment failures. The mine plan (page 3-21) and subsidence control plan (page 3-28) state that the minability of the reserves under the canyon escarpments will be determined using geotechnical data and computer models developed to determine the potential and extent of mining induced escarpment failures when mining progresses into these areas.

   In accordance with lease stipulations, the Forest Service will not consent to mining under the escarpments until empirical data is collected and computer models are developed which can reasonably be used to predict the potential for occurrence, extent and duration for escarpment failures. Data which is currently available shows that longwall mining under the escarpments induces escarpment failures.

   Either the mine plan should be revised to eliminate the portions of the panels which extend under the escarpment or the geologic and geotechnical data needs to be presented in the permit application

package to enable reasonable evaluation of the potential impacts and mitigation measures. If there is potential for escarpment failures to be induced, an environmental analysis will be necessary on which to base a consent/non-consent decision. The Bureau of Land Management will need to review the geotechnical data and advise the Forest Service of any areas where mining would disrupt the surface.

3. Cultural Resources

A cultural resources survey of the extension area was completed as discussed on pages 2-1 and 2-2. One significant archeological site was identified (Site 42EM 2223). The mine plan must provide for protection of this site from the effects of subsidence.

4. Hydrology - General

Neither the mine plan nor the Probable Hydrologic Consequences Report adequately address the potential for impacts to the culinary water wells in Rilda Canyon and the flow and quality of water in the drainages in the vicinity of the permit and lease area. Utah Power and Light Company has been conducting hydrologic monitoring in Rilda Canyon for about 2 years. This information needs to be presented with an adequate analysis of the potential impacts.

5. Hydrology, Section III. A.

Table HT-9 does not contain precipitation data as stated in the last paragraph in this section. The referenced table contains temperature data.

6. Hydrologic Monitoring Program, Section B. Groundwater Hydrology

The springs which are being monitored are listed in this section. Since additional lands are being identified for permitting and the permit application package shows additional lands to be mined under the next five-year term, additional springs must be identified for monitoring. The Forest Service identified springs in the existing permit area which need to be added to the monitoring program as mining progresses. Since lands are being proposed to be added to the permit area, the springs in this additional area need to be evaluated for monitoring. The additional springs in both cases need to be included in the monitoring plan.

7. Probable Hydrologic Consequences, Page PHC-1

It is stated in the second paragraph on this page that the hydrologic consequences will be small because this is an underground mining operation. Underground mining operations could have significant impacts on groundwater. The fact that this is an underground mining operation is not adequate justification for this conclusion.

8. Probable Hydrologic Consequences, Page PHC-6

At the top of this page it is stated that the USGS identified the sediment yield in Deer Creek Canyon to be 3.1 tons/day. The report

and author must be referenced so that this statement and the information leading to this determination can be reviewed for adequacy.

9. Probable Hydrologic Consequences, Page PHC-10

In the second paragraph it is stated that fractures in the mudstone which overlie the coal seam would be sealed by swelling clays. It is stated that this determination is based on past experience in the mine property. This needs further justification by referencing specific observations and monitoring data.

The last sentence in the second paragraph states that UP&L commits to identifying in detail the nature of the strata beneath the Rilda Canyon alluvial system prior to second mining so that a detailed appraisal of hydrologic consequences can be made. This is not acceptable due to the importance of the developed culinary water springs which are located in Rilda Canyon. The Forest Service will not consent to approval of the Permit Application Package until it is demonstrated that the springs will not be affected or the potential impacts can be adequately mitigated.

The Roan Canyon spring (79-25) which is located in Roan Canyon is of particular importance because it is one of the main springs which supply water to Cottonwood Canyon. This spring needs to be addressed as to how its flow is related to the geology and groundwater system on East Mountain. The potential impacts to this spring and the flow of Cottonwood Creek need to be discussed.

10. Probable Hydrologic Consequences, Page PHC-12

This section does not adequately discuss potential impacts to the culinary springs in Rilda Canyon nor the Roan Canyon spring.

11. Probable Hydrologic Consequences, Page PHC-13

At the bottom of this page, it is stated that the cumulative effect of discharge waters is thought to be insignificant because the volume of water to be discharged is negligible in comparison to the volume which flows in Cottonwood and Huntington Creeks. The water monitoring data for the drainages, water quality, and the calculated discharge flows should be quantified as justification for this statement and references to the appropriate tables should be included.

In our discussions with UP&L Company, they have indicated that they will need to discharge water in Rilda and Meetinghouse Canyons which will continue after the mine is abandoned and reclaimed. This section must discuss the changes in flow and quality to the tributary channels where water will be discharged, to show what the impacts to these tributary channels will be. The present report only discusses the impacts that discharge will have on the main drainages and glosses over the impacts to the tributaries. We will need to analyze the effects to both the tributaries and the main drainages before we can consent to water discharge at these locations.

12. Tables HT-2 through HT-7 present water quality information. The units of measure for the different parameters presented must be shown for the data to have any meaning. The tables need to be revised.

13. The location where temperature measurements were taken need to be shown on Table HT-9.

14. Wildlife and Livestock

    On page 2-14 it is stated that wildlife and livestock grazing is limited to the higher elevations. While it is true that livestock don't use the steep slopes above the mine, wildlife species utilize the entire mine area. A correction is needed.

15. Threatened or Endangered Plants

    It is stated on page 2-14 that no endangered or threatened plants were identified during vegetation sampling. It sounds like only a casual survey of threatened and endangered plants was conducted. A survey needs to be conducted in consultation with the U.S. Fish and Wildlife Service and Forest Service to determine conclusively if the extension area contains any threatened or endangered plants. In addition, the coal rules require that the survey include proposed or candidate species. The operator should contact Bob Thompson of the Forest Service for consultation with the Forest Service.

16. Vegetation Monitoring Plan

    On the bottom of page 2-46 the reference to usthorthent soils should be changed to lithic soils.

If you have any questions regarding our comments, please contact the Forest Supervisor's Office in Price, Utah.

Sincerely,

for
GEORGE A. MORRIS
Forest Supervisor