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United States
Department of
Agriculture

Forest
Service

Manti-LaSal
National Forest

590 West Price River Dr.
Price, Utah 84501

Reply to: 2820

Date: April 17, 1990

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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: Rilda Canyon Lease Tract Addition, Permit Application Package, Utah Power and Light Company, Deer Creek Mine, ACT/015/018(90-1), Folder #2, Emery County, Utah

Dear Lowell:

We have reviewed the subject permit application package and have comments as follows:

1. The letter from the Division transmitting the review copy, dated February 12, 1990, states that there are no surface disturbances associated with this permit revision. The permit application package, however, discusses new portals and associated facilities planned in Rilda Canyon and new breakouts planned in the South Fork, which is actually the main fork of Meetinghouse Canyon.

We will not consent to proposed surface facilities without complete and detailed plans and drawings. The proposed portals in Rilda Canyon would involve both on and off-lease facilities including an electrical powerline, access road construction, portal pads, fans, parking lot, bathhouse, etc., which will require an analysis of cumulative effects to all resources including recreation traffic in Huntington Canyon, before a decision could be made.

If the intent of this application is to permit only the extension of development workings (with no surface disturbance) into the new area north of the graben crossing pending the upcoming 5-Year renewal, the references to the surface facilities should be removed. In this case, we would evaluate the permit area extension based on the environmental assessments already prepared by the Forest Service for the involved leases. If the intent of the permit extension is to permit the portal facilities (even in concept) or if the permit extension could result in additional surface disturbances, such as escarpment failures, complete and detailed plans for the surface disturbances would need to be included in the permit package and an environmental analysis would need to be conducted.

2. The permit application package is not complete. It does not contain information needed to address land use, wildlife, soils, vegetation, and historic, cultural and paleontological resources as required under

the SMCRA regulations, the Utah Coal Regulatory Program and lease stipulations.

3. The Mining Plan (784.11) involves longwall mining under the steep canyon escarpments and Castlegate Sandstone outcrops where mining in other areas with similar conditions has induced escarpment failures. The Subsidence Control Plan (784.20), page 9, states that the applicant shall monitor subsidence in areas of the Castlegate Cliff using on-the-ground survey prisms until the cliff is stable and no further movement is anticipated. It further states that all available geologic and geotechnical data will be used to develop a predictive model of the stability of the cliff to be undermined and forecast anticipated effects.

The geologic and geotechnical data needs to be presented in the permit application package to predict where there is potential for escarpment failures to occur. The Bureau of Land Management will need to review the geotechnical data and advise the Forest Service of any areas where escarpment failure could be induced by the proposed mining activity. We will not consent to mining under the escarpments on a conceptual basis since this would not be consistent with lease stipulations.

4. Three breakouts in the South Fork (Main Fork) of Meetinghouse Canyon are proposed on page 3-5, but the breakouts and associated development workings are not shown on any of the mine maps.

✓ 5. 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.

✓ 6. 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.

✓ 7. 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.

MEMO WRITTEN 2/19/92

8. 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.

9. 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.

10. 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.

11. 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.

12. 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.

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

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

Sincerely,

Warren R. Jensen
 for
 GEORGE A. MORRIS
 Forest Supervisor

ANNUAL HYDROLOGIC REPORT - 1985

TABLE 20: YEARLY SPRING DISCHARGE VARIATIONS (GPM)

Spring	1979	1980	1981	1982	1983	1984	1985
Sea Sheba	12.0	13.0	10.7	15.0	22.9	19.7	14.4
Chn Burnt Tree	12.0	26.0	9.2	12.0	30.5	26.6	26.1
Pine Springs	4.1	12.0	2.6	5.3	17.1	4.4	3.9
Pine Springs Trough	6.6	Dry	6.9	8.6	20.9	10.9	7.5
Ted's Tub	65.0	78.0	27.3	60.0	89.0	48.0	39.1
79-1	40.0	130.0	28.3	72.0	106.7	51.6	48.0
79-2	0.5	7.5	10.0	12.0	9.1	9.7	5.5
79-3	2.6	15.0	2.6	10.0	26.7	21.8	4.6
79-5	3.1	1.2	4.6	5.0	5.7	6.7	3.0
79-6	0.86	Damp	Dry	1.0	1.2	1.3	Damp
79-7	0.53	Damp	5.0	1.0	1.8	2.0	0.8
79-8	2.0	1.5	1.7	2.4	5.9	***2.1	2.0
79-11	6.0	5.0	0.5	2.0	8.3	5.5	4.1
79-15	2.0	5.0	7.2	27.5	42.9	26.1	18.2
79-17	0.5	0.5	0.2	4.6	5.0	7.4	3.7
79-18	4.0	17.0	16.0	20.0	25.0	25.5	5.1
79-19	3.0	Dry	3.5	46.0	41.1	35.3	23.1
79-20	-	1.0	Dry	4.3	4.3	4.0	2.6
79-21	-	Dry	Dry	Dry	Damp	Dry	Dry
79-22	14.0	Dry	Dry	0.5	1.0	2.4	Damp
79-25	10.0	8.0	4.6	12.0	12.4	9.5	14.0
79-28	3.0	43.0	4.0	4.6	16.7	11.2	8.6
79-29	4.0	6.0	1.3	4.0	10.0	6.2	6.0
79-30	1.5	2.0	Damp	10.0	4.2	*** 1.2	5.0
79-31	0.6	0.5	0.4	1.0	1.0	*** 0.9	1.0
79-32	1.4	3.0	0.45	2.1	3.3	3.1	2.7
79-34	10.0	5.0	2.4	30.0	56.7	42.9	18.5
Sub-Total	271.69	381.40	152.45	377.20	569.4	386.0	267.5
80-41		14.0	0.4	1.0	10.9	15.0	5.8
80-42		5.7	Dry	Dry	27.3	4.3	Damp
80-43		10.0	Damp	10.0	24.0	20.0	6.6
80-44		20.0	39.6	12.0	24.0	13.1	5.5
80-45		12.0	Damp	4.0	12.0	1.1	0.5
80-46**	40.0	31.0	1.6	12.0	60.0	28.3	18.2
80-47**	20.0	12.0	4.6	12.0	20.0	15.0	12.5
80-48		5.0	1.8	1.33	26.7	18.8	10.4
80-49		4.0	1.3	15.0	60.0	42.9	26.8
TOTALS (Includes All Springs)	350*	495.10	201.75	444.53	834.3	544.5	353.8

* Estimated

** In 1979 these springs were monitored as 79-20 and 79-21.

*** Monitoring delayed - access blocked by mudslide, date of measurement - 8-22-84