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State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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November 1, 2000

Dan Meadors, General Manager
Canyon Fuel Company, LLC
HC 35 Box 380
Helper, UT 84526

Re: Findings for Utah Power & Light Tract, Canyon Fuel Company, LLC, Skyline Mine, C007005-IB00B, Outgoing File

Dear Mr. Meadors:

The above-referenced amendment has been reviewed and there are deficiencies that must be adequately addressed prior to approval. A copy of our technical analysis is enclosed for your information. Please respond to these deficiencies January 2, 2001 or the Division will return your application.

If you have any questions, please call me at (801) 538- 5325 or Mike Suflita at (801) 538-5259.

Sincerely,

Daron R. Haddock

Daron R. Haddock
Permit Supervisor

mjs/sm
Enclosure:
cc: Chris Hansen, Canyon Fuel Co.
Price Field Office
O:\007005.SKY\FINAL\DeflB00B.wpd

State of Utah

Utah Oil Gas and Mining

Coal Regulatory Program

Skyline Mine
IBC / UP&L Tract Amendment
C007005- IB00B
Technical Analysis
October 26, 2000

TABLE OF CONTENTS

INTRODUCTION 1

SUMMARY OF OUTSTANDING DEFICIENCIES 3

ADMINISTRATIVE INFORMATION 7
- OWNERSHIP AND CONTROL INFORMATION 7
- VIOLATION INFORMATION 8
- RIGHT OF ENTRY 8
- UNSUITABILITY CLAIMS 9
- PERMIT TERM, INSURANCE, PROOF OF PUBLICATION, AND FACILITIES USED IN COMMON 9

ENVIRONMENTAL RESOURCE INFORMATION 11
- HISTORIC AND ARCHAEOLOGICAL RESOURCE INFORMATION 11
- VEGETATION INFORMATION 11
- FISH AND WILDLIFE RESOURCE INFORMATION 12
  - Wildlife Information 12
  - Threatened and Endangered Species 13
- LAND USE RESOURCE INFORMATION 15
- PERMIT AREA 15
- GEOLOGIC RESOURCE INFORMATION 16
- MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION 16
  - Coal Resource and Geologic Information Maps 17
  - Existing Structures and Facilities Maps 17
  - Existing Surface Configuration Maps 17
  - Mine Workings Maps 17
  - Permit Area Boundary Maps 18
  - Contour Maps 18

OPERATION PLAN 21
- MINING OPERATIONS AND FACILITIES 21
  - Type and Method of Mining Operations 21
  - Facilities and Structures 21
- EXISTING STRUCTURES: 21
- COAL RECOVERY 22
- SUBSIDENCE CONTROL PLAN 23
  - Renewable resources survey 23
  - Subsidence control plan 23
  - Performance standards for subsidence control 24
  - Notification 25

TABLE OF CONTENTS

FISH AND WILDLIFE PROTECTION PLAN 26
Protection and Enhancement Plan 26
Endangered and Threatened Species and Bald and Golden Eagles 27
HYDROLOGIC INFORMATION 27
Surface-water monitoring 27
MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS 29
Affected area maps 29
Mining facilities maps 29
Mine workings maps 30
Monitoring and sample location maps. 30

RECLAMATION PLAN 31
APPROXIMATE ORIGINAL CONTOUR RESTORATION 31
BACKFILLING AND GRADING 31
MINE OPENINGS 31
ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES 32
MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS 32
Reclamation surface and subsurface manmade features maps 32
BONDING AND INSURANCE REQUIREMENTS 32
Determination of bond amount 32

INTRODUCTION

On July 26, 2000 the Division received a proposal from Canyon Fuel Corp. to add 459 acres to the permit area for Skyline Mine. The new tract is located due south of the existing permit area and is located on privately owned property. The coal is owned by Utah Power & Light and would be mined through a lease agreement between the two parties since Skyline Mine is the most reasonable access to the coal. Deficiencies were found and these will need to be corrected before Division approval for the amendment can be granted.

SUMMARY OF OUTSTANDING DEFICIENCIES

The Technical Analysis regarding the proposed permit changes is not complete at this time, pending submittal of additional information by the permittee and further review by the Division, to address outstanding deficiencies in the proposal. A summary of those outstanding deficiencies is provided below. Additional comments, concerns and deficiencies may also be found within the analysis and findings made in this Draft Technical Analysis which have not been presented in this summary. Upon finalization of this review, any outstanding deficiencies will be evaluated for compliance with the regulatory requirements. Such deficiencies may be conditioned to the requirements of the permit issued by the Division, result in denial of the proposed permit changes, or may result in other executive or enforcement action as deemed necessary by the Division at that time to achieve compliance with the Utah Coal Regulatory Program.

Accordingly, the permittee must address those deficiencies as found within this Draft Technical Analysis and provide the following, prior to approval, in accordance with the requirements of:

R645-301 -621, -625, except for the Connellville Fault, faults in the IBC area are not shown on Plate 2.2.1-1a or other maps in the MRP. 18

R645-301-112.500 and R645-301-112.600, The lists of owners of surface and subsurface lands within and contiguous to the permit area need to be updated. 7

R645-301-114, Drawing 3.1.8-3 shows an area of mining under a portion of Electric Lake at the bottom of James Canyon, and this is not allowed according to the lease with PacifiCorp. The applicant needs to modify the mine plan. 8

R645-301-121.200, -622.200, contour index numbers from the potentiometric surface map are on Plates 2.2.1-1a, 2.2.7-3, and 2.2.7-4. 19

R645-301-322, The applicant needs to update the list of threatened and endangered species in Table 2.9-4. 14

R645-301-322, The application needs to include a plan for monitoring the fish and macroinvertebrate populations of Burnout and James Creeks. 14

R645-301-330, The application needs to contain a commitment to mitigate any negative effects of mining on the fish and macroinvertebrate populations of James Creek. 27

R645-301-521.120 The permittee must show the location of the new gas pipeline. The new pipeline is needed to replace the existing one in the UP&L tract. 30

R645-301-521.131, Maps in the plan are required to show surface and subsurface land ownership information. The application includes two maps showing this information for the proposed addition to the permit area, but these maps do not show this same information for the current permit area. 7

R645-301-521.141 The permittee must change the mine plan so that all mining will occur within the permit boundaries. Map 3.1.8-3, Mine 3 Level 2 Mine Plan Including UP&L Tract, shows that mining has occurred outside the permit boundaries. See Township 13 South Range 6 East W1/2 of Section 24 and the W1/2 of Section 25. 16

R645-301-521.141 and R645-300-121.120 The permittee must give the Division a Permit Boundary Map. The Permit Boundary Map must show permit boundaries, the number of permitted acres, the dates and changes to the permit boundaries. While several maps show the permit boundaries, they are not always updated every time a permit boundary change occurs. To avoid confusion the permittee must include a permit boundary map and reference that map in the MRP. 18

R645-301-521.141 and **R645-300-121.120** The permittee must give the Division a Permit Boundary Map. The Permit Boundary Map must show permit boundaries, the number of permitted acres, the dates and changes to the permit boundaries. While several maps show the permit boundaries, they are not always updated every time a permit boundary change occurs. To avoid confusion the permittee must include a permit boundary map and reference that map in the MRP. 16

R645-301-521.141 and R645-300-121.120 Provide a Permit Boundary Map. The Permit Boundary Map must show permit boundaries, the number of permitted acres, the dates and changes to the permit boundaries. While several maps show the permit boundaries, they are not always updated every time a permit boundary change occurs. To avoid confusion the permittee must include a permit boundary map and reference that map in the MRP. 30

R645-301-525.110 The permittee must give the Division a copy of a map at a scale of 1:12,000 or larger that shows the location and type of structures and renewable resource lands that subsidence may materially damage of for which the value or reasonably foreseeable use may be diminished by subsidence, and showing the location and type of State-appropriated water that could be contaminated, diminished, or interrupted by subsidence. 26

R645-301-525.110, Submit a copy of a map at a scale of 1:12,000 or larger that shows the location and type of structures and renewable resource lands that subsidence may materially damage of for which the value or reasonably foreseeable use may be

diminished by subsidence, and showing the location and type of State-appropriated water that could be contaminated, diminished, or interrupted by subsidence. 30

R645-301-525.410 and R645-301-521.141 The permittee must include a map that shows the sequence and timing of the development work and underground mining in the amendment. 25

R645-301-525.410 and R645-301-521.141, Iinclude a map that shows the sequence and timing of the development work and underground mining in the amendment. 30

R645-301-525.420 and R645-301-521.142 The permittee must show the areas scheduled to subsided. The permittee must show that subsidence will not occur in either the James Canyon stream inlet or the high-water level of Electric Lake Reservoir. See Page 4-94 of the MRP for similar commitment. The permittee must show why full extraction mining would occur under the pipeline in Section 35. Overlay Map 4.17.1-1 and Map 3.1.8-3 for details. 25

R645-301-525.440 The permittee must give the Division a map that shows the location of the new monitoring points for the UP&L tract. 26

R645-301-525.541 and R645-301-525.542 The permittee must use a 30° angle-of-draw when determining the subsidence boundaries or show why a lesser angle should be used. The permittee must reference any studies used to support a lesser angle. If those studies are not readily available then the permittee must supply the Division with a copy. 25

R645-301-542.320 The permittee must give the Division a map that shows the location of the gas pipelines at the time of final reclamation. 32

R645-301-624.210, logs for bore holes 98-2-1, 98-3-1c, and 98-3-2c are not in the submittal. There is no information on depth or occurrence of ground water in these bore holes. 16

R645-301-724, The applicant needs to monitor water flows in James Creek near Electric Lake. This needs to be done at least monthly intervals while the site is accessible and should be done on approximately the same dates each year. Flume F-9 should be added to the water monitoring plan so data is submitted to the Division on a regular basis. 14

R645-301-730, 1) A commitment to submit all data, past and future, taken at the Forest Service boundary monitoring station to the Division, as part of the water

monitoring for the MRP. **2)** Inclusion of the monitoring program agreed to at the 8/23/2000 meeting referenced above. The monitoring station at the mouth of James Creek will become a permanent part of the MRP. The monitoring schedule needs to include the chemical parameters normally done on surface waters for the mine. **3)** The complete mining plan needs to be included to show that multiple seams will be mined under James and Burnout Creek. The times the various locations will be mined within each seam must be included. **4)** Update references to the Denver & Rio Grande Railroad. 29

ADMINISTRATIVE INFORMATION

OWNERSHIP AND CONTROL INFORMATION

Regulatory Reference: R645-301-112

Analysis:

The applicant has updated ownership and control information. This will need to be checked in the applicant violator system, but it appears to be complete.

The applicant has also updated the lists of owners of lands within and contiguous to the permit area. Drawings 1.6-1 and 1.6-2, the land ownership maps, have been revised, but the revised maps are not complete. According to the C-2 form, Drawing 1.6-2 would replace Drawing 1.6-2 in the current plan. This map is supposed to show coal ownership, but it only shows this information for the proposed addition to the permit area, not the rest of the area. Drawing 1.6-1 is supposed to show surface ownership information, but it does not include this information for most of the areas on the map, including the entire current mine permit area.

Sections 112.500 and 112.600 contain lists of the owners of lands within and contiguous to the permit area. This information is confusing and needs to be revised. There are two lists of owners of contiguous lands, both surface and subsurface, the lists conflict. Because the land ownership maps are incomplete, it is impossible to check the lists against the maps.

The lists of the names and addresses of owners of surface and subsurface rights within the permit area have not been changed, but they need to be updated.

Findings:

Information in the application is not adequate to meet the requirements of this section of the regulations. Prior to final approval, the applicant must supply the following in accordance with:

R645-301-521.131, Maps in the plan are required to show surface and subsurface land ownership information. The application includes two maps showing this information for the proposed addition to the permit area, but these maps do not show this same information for the current permit area.

R645-301-112.500 and R645-301-112.600, The lists of owners of surface and subsurface lands within and contiguous to the permit area need to be updated.

VIOLATION INFORMATION

Regulatory Reference: R645-301-113

Analysis:

The applicant has updated the violation information for the plan.

Findings:

Information in the application is adequate to meet the requirements of this section of the regulations.

RIGHT OF ENTRY

Regulatory Reference: R645-301-114

Analysis:

The application includes right of entry information for the proposed addition, including a copy of the lease between Canyon Fuel and PacifiCorp. Only part of the leased area would be included in the permit area, and the application includes a metes and bounds description of the area that would be added. The legal description appears to match the proposed addition shown on the maps in the application. This fulfills the regulatory requirements for providing right of entry information.

The lease with PacifiCorp specifically says no mining of any kind is allowed within the high water mark of Electric Lake, including a buffer zone. Drawing 3.1.8-3 shows an area of mining under a portion of Electric Lake at the bottom of James Canyon. This is not allowed under the terms of the lease in the application, and the mine plan needs to be adjusted accordingly.

Findings:

Information in the application is not adequate to meet the requirements of this section of the regulations. Prior to final approval, the applicant must supply the following in accordance with:

R645-301-114, Drawing 3.1.8-3 shows an area of mining under a portion of Electric Lake at the bottom of James Canyon, and this is not allowed according to the lease with PacifiCorp. The applicant needs to modify the mine plan.

UNSUITABILITY CLAIMS

Regulatory Reference: R645-301-115

Analysis:

The application includes no new information about unsuitability claims. The Division is unaware of any proposal to designate the area as unsuitable for mining.

Findings:

Information in the application is adequate to meet the requirements of this section of the regulations.

PERMIT TERM, INSURANCE, PROOF OF PUBLICATION, AND FACILITIES USED IN COMMON

Regulatory Reference: R645-301-116 and -117

Analysis:

The permit term would not change with this proposal.

The applicant maintains an insurance policy, and the Division has a copy on file.

Because the application is for an incidental boundary change and not for a new permit or for a significant revision, public notice is not required.

The applicant is not using facilities in common with any other permitted operation.

Findings:

Information in the application is adequate to meet the requirements of this section of the regulations.

ENVIRONMENTAL RESOURCE INFORMATION

HISTORIC AND ARCHAEOLOGICAL RESOURCE INFORMATION

Regulatory Reference: R645-301-411.140

Analysis:

Appendix A-3 of the current mining and reclamation plan contains various cultural resources reports, mostly about the current permit area. There has been some survey work done in the proposed addition to the permit area as part of exploration operations. A report dated October 2, 1978, from Archeological-Environmental Research Corporation details a survey conducted in the area. One drill hole and about two seismic lines in the James Canyon area were surveyed, and nothing "of any significance" was found.

The applicant has fulfilled the regulatory requirement to include available cultural resource information about the area. In all of the cultural resource surveys of the area, including a 100% survey of disturbed areas and a 10% survey of the rest of the permit area, only a few sites were found, and none of these was considered eligible for listing in the National Register of Historic Places. The entire area proposed to be added to the permit area was not surveyed, but because of the lack of significant sites in the area, because there has been some survey work done with no cultural resource sites found, and because there will be no surface disturbance other than subsidence, information in the application is considered adequate.

Findings:

Information in the proposal is adequate to meet the requirements of this section of the regulations.

VEGETATION INFORMATION

Regulatory Reference: R645-301-321

Analysis:

Drawing 2.7.1-1a in the application shows vegetation communities in the proposed addition to the permit area. The four communities in the area are sagebrush/grass, riparian, conifer-timber, and aspen. The text of the application includes general descriptions of these areas.

The C-2 form indicates Drawing 2.7.1-1a should replace the same drawing in the mining and reclamation plan. It appears, instead, that the map in the application should supplement the map in the plan.

Other than subsidence, no surface disturbance is planned, so detailed vegetation information is not required.

Findings:

Information in the proposal is adequate to meet the requirements of this section of the regulations. Drawing 2.7.1-1a would not replace the vegetation map in the current plan but should supplement it. Any future C-2 forms should correct this problem.

FISH AND WILDLIFE RESOURCE INFORMATION

Regulatory Reference: R645-301-322

Analysis:

Wildlife Information

Table 2.9-5 lists those animals classified by the Division of Wildlife Resources as Native Utah Wildlife Species of Special Interest. Other than this, the application includes no new wildlife information.

The application contains no information about whether James Creek is a fishery although the Division of Wildlife Resources has indicated verbally it is an important spawning area for fish from Electric Lake. Wildlife Resources considers Electric Lake to be vital for the fisheries program in the Southeast Region.

The Forest Service study of Burnout Creek was completed in 1998. This study examined whether there were any changes to the channel morphology, water flows, or riparian vegetation in Burnout Canyon as a result of subsidence. James Creek was used to compare to Burnout Creek. The study concluded there were probably relatively minor changes to the pool/riffle ratio, but there were no other clearly measurable changes. The Forest Service study did not examine fish or macroinvertebrate populations in either Burnout Creek or James Creek, so there is no information about whether the changes in channel morphology may have affected fish use in Burnout Creek.

The applicant needs to conduct fish and macroinvertebrate studies in James Creek and, because mining and subsidence is not yet completed, in Burnout Creek as well. The surveys for fish need to be done in the fall for two consecutive years, at least one of which should be before any mining occurs, and

every three years until three years after mining is completed in the area. The applicant also needs to collect information about macroinvertebrates on a similar schedule except that they would be sampled in the fall and spring instead of just in the fall.

Drawing 23-6-1 shows a flume (F-9) in James Creek at the Forest Service boundary, and the application contains flow data from this flume. This flume is about one-third of the way from Electric Lake to the top of James Creek, so it would not show the effects of mining in much of the James Canyon watershed. There is no commitment in the plan or application for continued monitoring of this flume.

The applicant needs to establish a flow monitoring point in James Creek near Electric Lake and collect flow data at monthly or shorter intervals during times of the year when the area is accessible, about June through October. Samples need to be taken consistently near the same dates each year. If the applicant is monitoring other locations in James Creek, such as flume F-9, these locations should be made a part of the water monitoring plan in the mining and reclamation plan and the data submitted to the Division on a regular basis.

The annual report includes a map of raptor nests found in the area in 1999. There were no raptor nests found in the proposed addition to the permit area. Jeff Jewkes of the Forest Service has done ground surveys in the area. He confirmed in an August 2, 2000, telephone conversation that there are no known nests in the lower part of James Creek. There is one goshawk nest known from the lower part of Burnout Creek, but it has not been active in 2000.

Threatened and Endangered Species

The only information in the application about threatened and endangered species is a list in Table 2.9-4 of listed and proposed threatened and endangered species. This list was apparently taken from the Division of Wildlife Resources' Internet site, but it is not completely up to date.

More accurate and current information on threatened and endangered species is available from the Fish and Wildlife Service's Internet site. According to the information from the Fish and Wildlife Service, the applicant needs to make the following changes:

1. Delete the American peregrine falcon (*Falco peregrinus anatum*). It is no longer listed as threatened or endangered.

2. Add Canada lynx (*Lynx canadensis*) as a threatened mammal.

3. Add Deseret milkvetch (*Astragalus desereticus*) as a threatened plant species.

Although several plant species on the list in Table 2.9-4 occur in Emery County, most of these are low elevation, desert species that would not be expected in the proposed addition to the permit area.

The only threatened or endangered species that could potentially be in the area are the bald eagle and the southwestern willow flycatcher.

Bald eagles are known to have four nest sites in Utah, and none of these is near the Skyline Mines. Bald eagles are likely to fly over the area in late fall through early spring and could forage in Electric Lake when it is not frozen, but there are no known roosting or other concentration sites in the immediate area.

Most confirmed southwestern willow flycatcher nests are at lower elevations than those in the proposed addition to the permit area, but it is suspected there could be some at high elevations, such as near Fish Lake in Sevier County. They nest in dense willow patches, and the area along Huntington Creek above Electric Lake could potentially provide some habitat. The riparian area along James Creek is mostly wet meadow, and the application says the main species in the area are Kentucky bluegrass, bentgrass, Ross sedge, water sedge, Nebraska sedge, Baltic rush, and tufted hairgrass. While the Division is aware of some willow patches, they are not dense and would not provide the type of habitat needed by this species.

Four fish species on the list in Table 2.9-4 occur in the upper Colorado River drainage basin, and although they would not be in the permit area, the mine has the potential, through water depletions, of adversely affecting these species. These potential effects are discussed in the fish and wildlife protection section of this analysis.

Findings:

Information in the application is not adequate to meet the requirements of this section of the regulations. Prior to final approval, the applicant must supply the following in accordance with:

R645-301-322, The application needs to include a plan for monitoring the fish and macroinvertebrate populations of Burnout and James Creeks.

R645-301-724, The applicant needs to monitor water flows in James Creek near Electric Lake. This needs to be done at least monthly intervals while the site is accessible and should be done on approximately the same dates each year. Flume F-9 should be added to the water monitoring plan so data is submitted to the Division on a regular basis.

R645-301-322, The applicant needs to update the list of threatened and endangered species in Table 2.9-4.

LAND USE RESOURCE INFORMATION

Regulatory Reference: R645-301-411

Analysis:

The application includes no new information about land use in the proposed addition, so it is assumed the land uses are the same as those in the current permit area. These uses include recreation, grazing, and wildlife habitat. Since the vegetation communities are essentially the same as in the current permit area, it is reasonable to expect these same uses.

Findings:

Information in the application is adequate to meet the requirements of this section of the regulations.

PERMIT AREA

Regulatory Requirements: 30 CFR Sec. 783.12; R645-301-521.

Analysis:

The permittee must include a permit boundary map. Many maps show the permit boundaries but they are not always updated when a change occurs in the permit boundary. The permit boundary map will be one map that is updated every time a permit boundary change occurs. The permit boundary map must show the permit boundaries, the number of permitted acres, the dates and changes to the permit boundaries. The permittee must reference the permit boundary map in the Mining and Reclamation Plan (MRP).

Map 3.1.8-3, Mine 3 Level 2 Mine Plan Including UP&L Tract, shows that mining has occurred outside the permit boundaries. See Township 13 South Range 6 East W1/2 of Section 24 and the W1/2 of Section 25. The permittee must change the mine plan to that mining will only occur in within the permit boundaries.

Findings:

The information provided in the proposed amendment is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-521.141 and **R645-300-121.120** The permittee must give the Division a Permit Boundary Map. The Permit Boundary Map must show permit boundaries, the number of permitted acres, the dates and changes to the permit boundaries. While several maps show the permit boundaries, they are not always updated every time a permit boundary change occurs. To avoid confusion the permittee must include a permit boundary map and reference that map in the MRP.

R645-301-521.141 The permittee must change the mine plan so that all mining will occur within the permit boundaries. Map 3.1.8-3, Mine 3 Level 2 Mine Plan Including UP&L Tract, shows that mining has occurred outside the permit boundaries. See Township 13 South Range 6 East W1/2 of Section 24 and the W1/2 of Section 25.

GEOLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 784.22; R645-301-623, -301-724.

Analysis:

Only one minor change, a reference to additional surface geology mapped on Plate 2.2.1-1a, has been made to the text in Section 2.2 - Geology. Geologic resource information in the current MRP includes the area of the UP&L Tract IBC.

New Plates 2.2.7-3, Lower O'Conner 'B' Isopach Map and 2.2.7- 4, Overburden Isopach Map Lower O'Conner 'B' Seam, have been submitted. Isopach information for the IBC area appears to come from bore holes 98-2-1, 98-3-1c, and 98-3-2c, but logs for these bore holes are not in the submittal. There is no information on depth or occurrence of ground water in these bore holes.

Findings:

R645-301-624.210, logs for bore holes 98-2-1, 98-3-1c, and 98-3-2c are not in the submittal. There is no information on depth or occurrence of ground water in these bore holes.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

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

Analysis:

Coal Resource and Geologic Information Maps

Map 2.2-1, Topographic Map with Surface Geology, in the current MRP shows surface geology for the existing permit area, but the map does not extend south far enough to cover the proposed UP&L Tract IBC. In addition to Map 2.2-1, the Table of Contents lists Plate 2.2.1-1, Geologic Map of Skyline Mine Area, but no print of that map could be found in either of DOGM's copies of the MRP.

In the IBC submittal, Plate 2.2.1-1a, Surface Geology of the UP&L Tract, shows topography for the proposed permit area and adjacent areas; however, surface geology is shown for only a small area covering the IBC and the remainder of Section 3 (T. 14 S, R. 6 E.) west of the IBC. It is difficult to relate the geology of the small area mapped on Plate 2.2.1-1a to the geology of the rest of the permit and adjacent areas: one map covering the whole area would be preferable.

Except for the Connelville Fault, which lies roughly along the eastern boundary of the IBC, the faults shown on Figure 2.2-1 are not shown extending into the IBC on Plate 2.2.1-1a. Location of faults can be important information in preparing the subsidence control plan, especially considering the proximity of the projected underground workings to Electric Lake and the important cutthroat trout habitat in streams overlying the mine.

The contour index numbers from the Potentiometric Surface Map are on Plates 2.2.1-1a, 2.2.7-3, and 2.2.7-4. They should be removed.

New versions of Plates 2.2.7-3, Lower O'Conner 'B' Isopach Map, and 2.2.7- 4, Overburden Isopach Map Lower O'Conner 'B' Seam, are in the IBC submittal. On the current versions of these plates, the contour lines end at the permit area boundary: the new maps show the isopach thicknesses for the permit area, the IBC area, and a large adjacent area. Isopach information for the IBC area appears to come from bore holes 98-2-1, 98-3-1c, and 98-3-2c.

Existing Structures and Facilities Maps

The permittee did not state if there are any existing structures in the UP&L tract.

Existing Surface Configuration Maps

The existing surface configuration (topography) is shown on several maps, such as Map 1-6.1, Land Ownership. The topography is copied from U.S. Geological Survey (USGS) topographic maps and is considered adequate by the Division. Since no surface disturbance is proposed, the Division does not need to have detailed surface maps showing the premining, operation and proposed reclamation contours.

Mine Workings Maps

The permittee did not show any existing mine workings in the area proposed to be added to the permit boundaries on the mine maps.

Permit Area Boundary Maps

The permittee must include a permit boundary map. Many maps show the permit boundaries but they are not always updated when a change in the permit boundary occurs. The permit boundary map will be the one map updated every time a permit boundary change occurs. The permit boundary map must show the permit boundaries, the number of permitted acres, the dates and changes to the permit boundaries. The permittee must reference the permit boundary map in the MRP.

Contour Maps

The existing surface configuration (topography) is shown on several maps, such as Map 1-6.1, Land Ownership. The topography is copied from USGS topographic maps and is considered adequate by the Division. Since no surface disturbance is proposed, the Division does not need to have detailed surface maps showing the premining, operation and proposed reclamation contours.

Findings:

The information provided in the proposed amendment is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-521.141 and R645-300-121.120 The permittee must give the Division a Permit Boundary Map. The Permit Boundary Map must show permit boundaries, the number of permitted acres, the dates and changes to the permit boundaries. While several maps show the permit boundaries, they are not always updated every time a permit boundary change occurs. To avoid confusion the permittee must include a permit boundary map and reference that map in the MRP.

R645-301-121.200, -621, Plate 2.2.1-1a, Surface Geology of the UP&L Tract, in the IBC submittal shows surface geology is shown for only a small area covering the IBC and the remainder of Section 3 (T. 14 S, R. 6 E.) west of the IBC. It is difficult to relate the geology of the small area mapped on Plate 2.2.1-1a to the geology of the rest of the permit and adjacent areas. The Table of Contents lists Plate 2.2.1-1, Geologic Map of Skyline Mine Area, but no print of that map could be found in either of DOGM's copies of the MRP. One map covering the whole area would be preferable.

R645-301 -621, -625, except for the Connellville Fault, faults in the IBC area are not shown on Plate 2.2.1-1a or other maps in the MRP.

R645-301-121.200, -622.200, contour index numbers from the potentiometric surface map are on Plates 2.2.1-1a, 2.2.7-3, and 2.2.7-4.

OPERATION PLAN

MINING OPERATIONS AND FACILITIES

Regulatory Reference: 30 CFR Sec. 784.2, 784.11; R645-301-231, -301-526, -301-528.

Analysis:

Type and Method of Mining Operations

The mine map that the permittee gave the Division shows longwall panels will be used in the UP&L tract. Longwall mining is the standard mining method at the Skyline mine. The permittee will not need any new surface facilities to support the mining in the UP&L tract.

Facilities and Structures

The permittee did not propose any new surface facilities or structures to support mining in the UP&L tract.

Findings:

The permittee met the minimum requirements of this section.

EXISTING STRUCTURES:

Regulatory Reference: 30 CFR Sec. 784.12; R645-301-526.

Analysis:

The permittee did not address this issue. The permittee needs to state what structures, if any, are in the proposed permit area.

Findings:

The information provided in the proposed amendment is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-526.141 The permittee must state if whether structures exist on the UP&L permit addition. If structures do exist, they must be identified in the text and on maps.

PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES

Regulatory Reference: R645-301-411.140

Analysis:

The proposed addition to the permit area contains no known cultural resource sites, so no protection plan should be needed. In a letter dated August 14, 2000, the Division of State History concurred with the Division's assessment that no sites would be adversely affected by mining in the Utah Power and Light Tract.

Findings:

Information in the proposal is adequate to meet the requirements of this section of the regulations.

COAL RECOVERY

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

Analysis:

The UP&L tract has natural boundaries that make access to the coal difficult except from the Skyline Mine. The west and south boundaries are the shore line of Electric Lake. The east boundary is the Connonville Fault. The only practical access to the UP&L tract is though the north via the Skyline Mine. The longwall panels have been set up to maximize coal recover.

UP&L and its parent companies operate coal mines in Utah. The Division assumes that UP&L and its parent companies have reviewed and approved the coal recovery program.

Findings:

The permittee met the minimum requirements of this section.

SUBSIDENCE CONTROL PLAN

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

Analysis:

Renewable resources survey

The permittee did not include a renewable resource survey for the UP&L tract. However, information in the amendment shows that water rights and other renewable resource exist in the area. Thus, the permittee developed a subsidence control plan for the UP&L tract.

Subsidence control plan

The subsidence control plan must contain the following:

- A map of the permit and adjacent areas at a scale of 1:12,000 or larger showing the location of and types of structures and renewable resources in the area that could subside is required. The permittee did not give the Division a subsidence map at that scale.

  The Division overlayed Map 4.17.1-1, Extent of Planned and Controlled Subsidence Areas, over Map 3.1.8-3, Mine 3 Level 3 Mine Plan Including the UP&L Tract. The full support mining pipeline buffer - no subsidence area is above longwall operations.

  The Division contacted the permittee about this issue. The permittee said the pipeline over the UP&L tract is scheduled to be abandoned. They will update the maps to show that the pipeline corridor has been removed.

- A description of the method to remove coal including the size sequence and timing for development of the underground workings must be included amendment. Map 3.1.8-3, Mine 3 Level 2 Mine Plan Including UP&L Tract, shows the mine layout. Longwall mining will be the only method used to extract coal. The permittee did not include the timing for mining and development work.

- The permittee did not include a map that shows the extent of projected subsidence. The Division is very concerned about subsidence because of the proximity of Electric Lake. R645-301-525.541 states that an angle-of-draw of 30° will be used unless the permittee can show that another angle should be used. Thus the permittee has the responsibility to use either a 30° angle-of-draw or show why another angle should be used.

On Page 4-94 of the MRP the permittee states that a 22° angle-of-draw will be used. The support for the 22° angle-of-draw is based on the permittee's data of the Skyline mine and other comparable mining in the Wasatch Plateau. The permittee needs to show why the 22° angle of draw should be used. The support of the 22° angle of draw must include reference to all studies and why they are valid for the UP&L tract. All references need to be readily available to the Division, if not then the permittee has the responsibility to provide the information.

The permittee states on Page 4-49 of the MRP the following:

"There will be no mining caused subsidence under either the Electric Lake Reservoir, Upper Huntington Creek and Bolger Creek inlets to the reservoir, and no mining from which subsidence at the a 22° (from vertical) angle of draw would influence either these reservoir inlets or the high-water level of Electric Lake Reservoir. Map 4.1.1-1 shows the Electric Lake and the inlet buffer zone within which there will be no mining without Division/U. S. Forest Service approval."

The permittee needs to show that mining will not cause subsidence to occur in or near the shore of Electric Lake Reservoir or its inlets. The Division is concerned that subsidence could occur in the James Canyon inlet.

- The permittee did not include a description of the monitoring program for the UP&L tract. Map 4.17.5 needs to be updated to include the location of the monitoring points used to measure subsidence in the UP&L tract.

- The permittee needs to state if there are any areas within the UP&L tract that will be protected from subsidence. If such areas exist then the permittee needs to explain how those areas will be protected.

- The permittee described the anticipated effects of planned subsidence in the Mining and Reclamation Plan (MRP). The effects of subsidence include a general uniform lowering of the surface lands in broad areas. Thereby limiting the material effect to those land and causing no appreciable change to present land uses and renewable resources.

- The permittee describes the measures to mitigate any subsidence-related material damage in the MRP. The permittee committed to repair any damage to surface facilities including highways and pipelines.

Performance standards for subsidence control

The permittee committed in the MRP to repair any subsidence damage to the extent technically and economically feasible. This is a standard commitment that the Division accepts for repair of subsidence damage.

The permittee cannot mine under impoundments with a storage capacity of 20 acre-feet or more of water (Electric Lake Reservoir) unless the subsidence control plan demonstrates that subsidence will not cause material damage or reduce the reasonably foreseeable use of the structure. The permittee needs to show that the proposed mining will not damage Electric Lake Reservoir.

If mining causes damage to Electric Lake Reservoir then the Division will suspend mining until a revised subsidence control plan is approved.

Notification

The permittee is required to notify at least six months prior to mining all owners and occupants of surface properties above the underground workings. Utah Power and Light owns both the surface and coal in the UP&L tract. Utah Power and Light has leased the coal right to the permittee. The permittee needs to document notification to the lessor.

Findings:

The information provided in the proposed amendment is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-525.410 and R645-301-521.141 The permittee must include a map that shows the sequence and timing of the development work and underground mining in the amendment.

R645-301-525.420 and R645-301-521.142 The permittee must show the areas scheduled to subsided. The permittee must show that subsidence will not occur in either the James Canyon stream inlet or the high-water level of Electric Lake Reservoir. See Page 4-94 of the MRP for similar commitment. The permittee must show why full extraction mining would occur under the pipeline in Section 35. Overlay Map 4.17.1-1 and Map 3.1.8-3 for details.

R645-301-525.541 and R645-301-525.542 The permittee must use a 30° angle-of-draw when determining the subsidence boundaries or show why a lesser angle should be used. The permittee must reference any studies used to support a lesser angle.

If those studies are not readily available then the permittee must supply the Division with a copy.

R645-301-525.110 The permittee must give the Division a copy of a map at a scale of 1:12,000 or larger that shows the location and type of structures and renewable resource lands that subsidence may materially damage of for which the value or reasonably foreseeable use may be diminished by subsidence, and showing the location and type of State-appropriated water that could be contaminated, diminished, or interrupted by subsidence.

R645-301-525.440 The permittee must give the Division a map that shows the location of the new monitoring points for the UP&L tract.

FISH AND WILDLIFE PROTECTION PLAN

Regulatory Reference: R645-301-333

Analysis:

Protection and Enhancement Plan

The application includes no changes to the wildlife protection and enhancement plan, and with the exception of the James Creek area, no additional protection, enhancement, or monitoring plans are needed. The Fish and Wildlife Information section of this review discusses the information needed for James Creek.

To mitigate for the potential loss of Burnout Creek as spawning habitat, the applicant paid for a fish ladder to be constructed at Boulger Reservoir. The intent of this fish ladder was to allow fish access to the upper part of Boulger Creek where they could spawn in case Burnout Creek became unavailable. According to the Division of Wildlife Resources, fish use the fish ladder, but it is not known whether fish from Electric Lake are able to spawn in the upper part of Boulger Creek as a result of the fish ladder. In a meeting held August 24, 2000, representatives of the Division of Wildlife Resources agreed they would be willing to survey for fish in Boulger Creek similar to what the applicant needs to do in Burnout and James Creeks.

The application needs to contain a commitment to mitigate any negative mining-caused effects on James Creek. It is uncertain whether mining has caused any effects on fish using Burnout Creek as spawning habitat or if there will be any effects on the fish in James Creek. The fish and macroinvertebrate studies and the water monitoring required under R645-301-322 and R645-301-724 should determine these effects for James Creek. If there are no effects, no mitigation will be required. If

these studies determine there are adverse effects, the applicant will need to work with the Division and the Division of Wildlife Resources to determine appropriate mitigation measures.

Areas containing surface water and aspen are generally considered critical summer range for deer and elk. Also, all riparian areas are critical habitat. Most of the proposed addition to the permit area is in one of these categories.

Undermining the area should have little effect on the value of the area for a terrestrial wildlife habitat. Trees sometimes fall or lean when an area subsides, but this should have little effect on wildlife populations, especially since there are no known raptor nests in the area. The most likely effects are on the stream and riparian areas, but the Burnout Creek study found no effects on terrestrial riparian vegetation.

Endangered and Threatened Species and Bald and Golden Eagles

Any water depletions are considered to negatively affect the threatened and endangered fish of the upper Colorado River basin. The application includes no new information about additional water use, and, according to verbal information from the applicant, this is because the mine would use no more water if this amendment is approved than it is currently using. Therefore, there should be no additional negative effects.

Because the proposed addition to the permit area contains no habitat for threatened or endangered species, no protection or mitigation measures are needed. There are also no known bald or golden eagle nests in the area.

Findings:

R645-301-330, The application needs to contain a commitment to mitigate any negative effects of mining on the fish and macroinvertebrate populations of James Creek.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Surface-water monitoring

The submittal is to amend the Mining and Reclamation Plan to add 459 acres at the southern end of the current permit area, adjacent to and east of Electric Lake. The additional acreage is in the lower

James Creek drainage and constitutes about 30% of the total drainage area. The upper James Creek drainage is contained in the current permit and constitutes about 70 % of the total drainage area. About 33% of the 459 acres drains directly into Electric Lake.

As required, the ground water and surface water rights that are in the area are shown on Dwg.23-5-1-1, Surface Water Rights on and Adjacent to Skyline Property and Dwg. 23-5-2-1, Ground Water Rights on and Adjacent to the Skyline Property. A check of the Utah State Water Rights Internet pages showed that the rights shown were complete and accurate.

The water monitoring plan was revised to include two new springs. One is designated 2-413 and is located on the northeast corner of the new area. It was selected, "because of its proximity to the Connelville Fault, mining activity, and accessibility." The other is designated 3-290 and is located across Electric Lake about half-way up an unnamed drainage near the Sanpete and Emery County line. It was, "selected because it is located in an area where mining will not occur for some time and can be used as an undisturbed site for comparison to 2-413." While these are fitting sites, they do not provide sufficient monitoring. When Dwg. 23-6-1, Location of Hydrologic Monitoring Stations is reviewed, there is an absence of monitoring of James Creek. While a flume, designated F-9, is shown at the Forest Service boundary, that flume is only monitored according to the provisions of the Decision Memo between the Forest Service and Skyline Mine. That calls for, " Monthly stream discharge monitoring of James Creek at the existing flume during active subsidence and when accessible." With longwall mining the subsidence period is on the order of months before subsidence is complete. All data, past and future, taken at this station will need to be submitted to the Division as part of the water monitoring for the MRP.

The Utah Department of Wildlife Resources (DWR) expressed the same concern of inadequate monitoring in an August 10, 2000 letter to the Division. Subsequently, on August 23, 2000, a meeting was held to discuss this issue. Attendees included personnel from Skyline Mine, DOGM, and DWR. The outcome was a series of monitoring requirements that were believed to adequately protect James Creek. Included was a new flow monitoring station near the mouth of the creek, invertibrate studies, and fish population surveys. The meeting minutes were agreed to by all parties and the described monitoring program is understood to be included as part of the next submittal on this amendment. The monitoring station at the mouth of James Creek will become a permanent part of the MRP. The monitoring schedule needs to include the chemical parameters normally done on surface waters for the mine.

Since the coal is owned by Utah Power & Light, Inc.(UP&L), there is a lease agreement between them and Skyline Mine. That agreement is included in the submittal. That includes a provision to restrict mining to not occur within a buffer zone described as follows: "that area determined by a 22 degree draw angle from the bottom of the Coal seam being mined plus 25 ft. (measured horizontally) from the high water mark of Electric Lake, which is defined as an elevation of 8,575 feet above mean sea level." It appears that provision is being honored. See Dwg. 3.1.8-3, Mine 3 Level 2, Mine Plan Including UP&L Tract. It should be noted that this is not the only mining planned in the UP&L Tract. However, that information is based on discussions with the mine personnel and not on the contents of the submittal. The complete mining plan needs to be included to show that multiple seams will be

mined under James and Burnout Creek. The times the various locations will be mined within each seam must be included.

One minor editorial change seems appropriate. On page 1-20 reference is made the Denver and Rio Grande Railway. That firm has been out of business for several years and the information referencing it needs to be brought up to date.

Findings:

In its present form the submittal does not meet minimum regulatory requirements. Accordingly, the permittee must address those deficiencies as found within this Technical Analysis and provide the following, prior to approval, in accordance with the requirements of:

R645-301-730, 1) A commitment to submit all data, past and future, taken at the Forest Service boundary monitoring station to the Division, as part of the water monitoring for the MRP. **2)** Inclusion of the monitoring program agreed to at the 8/23/2000 meeting referenced above. The monitoring station at the mouth of James Creek will become a permanent part of the MRP. The monitoring schedule needs to include the chemical parameters normally done on surface waters for the mine. **3)** The complete mining plan needs to be included to show that multiple seams will be mined under James and Burnout Creek. The times the various locations will be mined within each seam must be included. **4)** Update references to the Denver & Rio Grande Railroad.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Affected area maps

The permittee did not include an affected area map. The Division generally considers a permit map adequate to met the requirements of the affected area map. The permittee did not give the Division a designated permit boundary map. They permittee did give the Division several maps that show the permit boundaries. Since the permittee does not update all maps when they submit an amendment, a permit boundary map is needed. The permit boundary map must show the permit boundaries, the number of permitted acres, the dates and changes to the permit boundaries.

Mining facilities maps

The permittee must show the location of the new gas pipeline. The new gas pipeline is needed so that the permittee can use full extraction mining in the UP&L tract. An operating pipeline is found above the proposed working in the UP&L tract.

Mine workings maps

Map 3.1.8-3, Mine 3 Level 2 Mine Plan Including UP&L Tract, shows the scheduled mine workings. The map does not include the sequence and timing of the development work and underground mining.

Monitoring and sample location maps.

The permittee did not include maps that show the location of the subsidence monitoring points for the UP&L tract.

Findings:

The information provided in the proposed amendment is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-521.141 and R645-300-121.120 Provide a Permit Boundary Map. The Permit Boundary Map must show permit boundaries, the number of permitted acres, the dates and changes to the permit boundaries. While several maps show the permit boundaries, they are not always updated every time a permit boundary change occurs. To avoid confusion the permittee must include a permit boundary map and reference that map in the MRP.

R645-301-525.110, Submit a copy of a map at a scale of 1:12,000 or larger that shows the location and type of structures and renewable resource lands that subsidence may materially damage of for which the value or reasonably foreseeable use may be diminished by subsidence, and showing the location and type of State-appropriated water that could be contaminated, diminished, or interrupted by subsidence.

R645-301-525.410 and R645-301-521.141, Iinclude a map that shows the sequence and timing of the development work and underground mining in the amendment.

R645-301-521.120, The permittee must show the location of the new gas pipeline. The new pipeline is needed to replace the existing one in the UP&L tract.

RECLAMATION PLAN

APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-270, -301-271, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Analysis:

Since no new surface disturbance other than subsidence is anticipated, the permittee does not have to address this issue.

Findings:

The permittee met the minimum requirements of this section.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

Since no new surface disturbance other than subsidence is anticipated, the permittee does not have to address this issue.

Findings:

The permittee met the minimum requirements of this section.

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

The permittee is not planning any new mine openings.

Findings:

The permittee met the minimum requirements of this section.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645-100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

Analysis:

The permittee does not propose any changes to the existing road systems.

Findings:

The permittee met the minimum requirements of this section.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Reclamation surface and subsurface manmade features maps

The permittee must show the location of the pipeline at the time of final reclamation.

Findings:

The information provided in the proposed amendment is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-542.320 The permittee must provide the Division with a map that shows the location of the gas pipelines at the time of final reclamation.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Determination of bond amount

There are no proposed mining activities in the UP&L tract for which the Division requires additional bond. The Division does not usually require a bond of activities outside the disturbed areas.

Findings:

The permittee met the minimum requirements of this section.

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