

0030



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

Michael O. Leavitt  
Governor  
Kathleen Clarke  
Executive Director  
Lowell P. Braxton  
Division Director

1594 West North Temple, Suite 1210  
PO Box 145801  
Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

August 19, 1999

TO: File

THRU: Daron Haddock, Permit Supervisor

FROM: Paul Baker, Reclamation Biologist

RE: 150-Acre Incidental Boundary Change, Canyon Fuel Company, LLC, SUFCO Mine, ACT/041/002-SR98(2), Folder #2, Sevier County, Utah

Handwritten signature and initials, possibly 'PTB' and '100271'.

**SUMMARY:**

Canyon Fuel Company is proposing to add 150 acres to its permit area in the vicinity of the Right Fork of Box Canyon. The Forest Service and Bureau of Land Management have reviewed the proposal together with the Pines Tract lease and the proposal to longwall mine under the upper portion of Box Canyon. The Division received the original proposal December 7, 1998, and revised proposals on May 20 and July 16, 1999.

Because no surface disturbance is planned, this review does not address the reclamation regulations.

**ANALYSIS:**

**ADMINISTRATIVE INFORMATION**

**RIGHT OF ENTRY**

Regulatory Reference: R645-301-114

**Analysis:**

Page 1-34 has been modified to show an addition of 150 acres to lease U-63214. The lease was modified effective June 9, 1999. This portion of the application is considered adequate.

150 Acre IBC  
ACT/041/002-98-2  
August 19, 1999  
Page 2

**Findings:**

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

## **ENVIRONMENTAL RESOURCE INFORMATION**

### **HISTORIC AND ARCHAEOLOGICAL RESOURCE INFORMATION**

Regulatory Reference: R645-301-411

**Analysis:**

The application contains adequate cultural resources information. It includes cultural resources surveys for the Pines Lease Tract and a new survey for the 150-acre area. Four previously unidentified archaeological sites were found in the new survey. Three of these are considered significant, and two of the significant sites are rock shelters that could be damaged by subsidence.

Map 2 in the cultural resources survey appears to be in error compared with Plate 5-10 of the application. On Map 2, the western boundary of the IBC area is farther west than the boundary shown on Plate 5-10; therefore, sites 42SV 2493, 2494, and 2495 appear to actually be outside the IBC area rather than right on its border. Site 42SV 2492, however, is within the boundary, and it is a pristine site that is considered to have excellent research potential. Using a GPS unit, the applicant has confirmed this site is over the longwall panel.

The applicant has included cultural resources information from a previously-submitted application together with correspondence between the Forest Service, the State Historic Preservation Office, and the Advisory Council on Historic Preservation. This section is now in compliance with the baseline information requirements for cultural resource information.

Any report that would allow a person to locate any of the cultural resources must be kept confidential.

**Findings:**

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

## **VEGETATION RESOURCE INFORMATION**

Regulatory Reference: R645-301-321

### **Analysis:**

The applicant has updated Plate 3-1 to show vegetation types in the area proposed to be added to the permit area. Most of this area is a sagebrush/grass community with some area of Douglas fir/spruce/ limber pine near Box Canyon.

The greatest potential effects on vegetation would be on riparian areas caused by water depletion. This is discussed under "Fish, Wildlife, and Vegetation Resource Protection" below.

### **Findings:**

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

## **FISH AND WILDLIFE RESOURCE INFORMATION**

Regulatory Reference: R645-301-322

### **Analysis:**

#### **Wildlife Information**

Wildlife maps of the permit area, Plates 3-2 and 3-3, have been extended to include the proposed lease addition. There is no new information in the text.

Two golden eagle nests are in the vicinity of the area that would be mined, but it does not appear they could be affected by the mining operations. Also in this area is high priority elk summer range and high priority deer winter range. Neither of these is considered habitat of unusually high value as defined by the regulations.

All riparian areas and water sources are considered critical habitat, and the main potential effects on wildlife would be from water loss. However, no further wildlife information is required at this time.

#### **Threatened or Endangered Species**

The application includes updated information for the mining and reclamation plan about

federally-listed threatened, endangered, proposed, and sensitive species. Although none of these species is known to occur within the incidental boundary change area, spotted bats, Link Trail columbines, flammulated owls, northern goshawks, and three-toed woodpeckers are known to live in the vicinity.

The species most likely to be affected according to the Environmental Impact Statement is the Link Trail columbine. According to Bob Thompson of the Forest Service, there are two known populations of this species in Box Canyon. One is in the upper part of the left fork of the main fork of the canyon. The other is apparently lower in the canyon to the west of the 150-acre area. According to Mr. Thompson, this second population is not as well established as the one in the upper part of the canyon. A monitoring program for this species is discussed under the "Fish, Wildlife and Vegetation Resource Protection" portion of this analysis.

**Findings:**

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

**LAND USE RESOURCE INFORMATION**

Regulatory Reference: R645-301-411

**Analysis:**

Plate 4-1 is a land use map, and it has been updated to show land uses in the area of the proposed addition. The land is used for grazing and nearby areas are used for limited timbering and grazing. Considering the nature of the proposed mining activities, the information provided is considered adequate.

**Findings:**

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

**OPERATION PLAN**

**PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES**

Regulatory Reference: R645-301-411.140

**Analysis:**

The application needs to discuss archaeological site 42SV 2492 in relation to the requirements of R645-301-411.140. It should show whether damage from subsidence is likely. It also needs to describe coordination efforts with the State Historic Preservation Office and present evidence of clearances. Particularly if subsidence damage is likely, the application should show what will be done to prevent, minimize, or mitigate adverse impacts.

**Findings:**

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

**R645-301-411.140**, The application needs to discuss archaeological site 42SV 2492 in relation to the requirements of R645-301-411.140.

## **FISH, WILDLIFE AND VEGETATION RESOURCE PROTECTION**

Regulatory Reference: R645-301-330

**Analysis:**

Direct adverse effects to wildlife are highly unlikely since no surface disturbance is proposed and there are no known raptor nests above the proposed addition to the permit area.

The listed threatened or endangered fish of the Upper Colorado River basin would be affected mostly by water depletions. No net depletions beyond those presently occurring with operation of the mine area are expected to occur in mining the 150-acre area.

The proposed addition to the permit area contains few cliffs, and they are not large. Therefore, there is little chance of adversely affecting species that use the escarpments. Three-toed woodpeckers, goshawks, and flammulated owls use Ponderosa pines and other tree species in and near the area for roosting and nesting. However, it is unlikely trees would be affected. The EIS concluded that individuals of these species could possibly be affected but that there would be no significant effects to the populations or to the species.

The most likely effects would be a disruption of water supply to the creek and springs in Box Canyon. The proposal to longwall mine under Box Canyon includes studies of the hydrology and riparian vegetation of the Box Canyon area and analyses of potential effects of mining the area. It is possible there will be some interception of ground and surface water flows,

but the exact effects are not known. According to the Mayo and Associates report, any disruption will probably be temporary, and inflow from springs on the sides of the canyon should provide at least some water downstream. The applicant will be monitoring water flows in the creek and some of the springs.

The applicant currently has a plan for monitoring the effects of subsidence on vegetation through taking color infrared photos every five years. Based on discussions with Forest Service personnel who work with remote sensing, it appears color infrared photographs will be more sensitive to changes in the vegetation composition and levels of stress than on-the-ground surveys. This photography began in 1987, and, according to operator, has been done in 1991 and 1996. The applicant has committed to taking the photos at least every five years.

Ideally, the applicant should take color infrared photographs showing the entire lease modification area just before mining and again one and two years after mining. However, the existing photographs should provide adequate baseline information, and pictures taken again in 2001 would show long-term effects of the mining. The photography is not designed to detect effects that occur in a very short period, so waiting until 2001 is more likely to indicate what long-term changes might occur in the vegetation community. If there is drastic disruption of water flows or if marked changes are noted in the vegetation, it is possible additional monitoring will be needed.

The Forest Service and the Division are concerned about potential effects on vegetation growing in bedding planes and fractures on the walls of Box Canyon. Color infrared photography would detect large scale changes and stresses in the plant communities but probably not effects on small populations on the canyon walls. In a draft submittal received by fax August 16, 1999, the applicant included a commitment to locate representative populations of vegetation growing within bedding planes and fractures in the walls of Box Canyon. They would be recorded with a topographic map, and a GPS survey would verify the coordinates. Reports of the survey will be included in the annual report.

The commitments in the draft submittal are acceptable, but they need to be included in the actual application.

The Link Trail columbine is the most likely endangered, threatened, or sensitive species to be affected. The population at the top of Box Canyon would not be affected, but it is possible the population lower in the canyon could be affected if the water supply was disrupted. The applicant commits to locate populations of the columbine using a topographic map and global positioning system. Photographs will be taken during the survey. The Division understands through conversations with the applicant and with the applicant's consultant that this survey was done and that additional populations of this species were found.

150 Acre IBC  
ACT/041/002-98-2  
August 19, 1999  
Page 7

**Findings:**

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

**R645-301-330**, The application needs to include a plan to locate and photograph representative samples of vegetation growing in bedding planes and fractures on the walls of Box Canyon. This plan has been included in a draft submittal, but this need to be incorporated in the application.

**RECOMMENDATIONS:**

The application should not be approved until deficiencies discussed in this review have been adequately addressed.