

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

October 16, 2003

TO: Internal File

THRU: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Jerriann Ernstsens, Ph.D., Environmental Specialist/Biology

RE: Technical Field Visit, Prior to Undermining East Fork of Box Canyon, Canyon Fuel Co., SUFCO, C/041/002

**Other Attendees:** Division – Dave Darby, Wayne Western, Steve Fluke

**Date & Time:** August 21, 2003, morning and afternoon.

### **PURPOSE:**

The Division biologist visited the main fork of Box Canyon at the SUFCO Mine on August 21, 2003. The main fork had been previously mined and subsided. The Permittee will undermine the east fork of Box Canyon in November of 2003. It is expected that certain areas of the east fork will subside.

The primary goal was to look for effects of subsidence to the vegetation and related biology of the main fork. The Division also looked at material damage of the land surface to the area because of subsidence.

**FIELD OBSERVATIONS:** SEE IMAGES 08222003 IN DATABASE.

### *ALONG MAIN FORK OF BOX CANYON*

It had rained the night before our visit.

The main fork of Box canyon had been undermined and subsided. Subsidence was obvious along the upper portion of the main fork. It was sometimes difficult to see if the cracks

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TECHNICAL FIELD VISIT

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on the canyon walls expanded to the stream channel because the bottom of the channel was filled in with sediment. Water had drained or evaporated in one water hole with a subsidence crack that was obvious.

The Division mentioned that there is no guarantee that water will not drain into subsidence cracks even if sediment fills the cracks. This reason is that the silt may still allow water to percolate to lower strata.

The hanging gardens were in marginal condition. Many plants were scraggly or dry.

The lower stream channel is perennial, but it had a low flow rate. There were pools along the channel, but many were experiencing algae blooms. The soil was a sandy-silt type. There were many riparian plant species, few macros, and evidence of game along the stream channel. Eventually, the "trail" along the channel became impassable so the Division hiked along the steep slopes to the south of the channel. The Division never made it to the final destination – confluence with east fork.

#### *LINK CANYON PORTAL AREA*

The Division visited the Link canyon portal area prior to hiking the main fork. DOGM noticed that there were no plants growing on the topsoil pile, except along the margins of the pile near the fence.

The Permittee had gouged the roadside cuts leading to the portal as well as the area above the portal. The gouges along the road were approximately 1' deep X 2' wide. There was no obvious topsoil layer or seedlings. The gouges above the portal were larger than above the road. The growth medium above the portal has coal fines and no obvious seedlings.

The spring that is about 100-200 feet from the portal was damp. This moisture could have been from the morning rain. The Permittee claims that there is not adequate flow from the mine to maintain this riparian area. The area is still wet at this time and the riparian plant species are still present.

#### *WATER HOLE ABOVE LINK CANYON PORTAL*

The Division visited the water hole above the Link Canyon portal area prior to hiking the main fork. DOGM noticed the water tubs were full and very green with algae. The Permittee plans to install a fence at this site, but construction had not begun.