

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

November 28, 2005

TO: Internal File

THRU: Peter H. Hess, Environmental Scientist III/Engineering, Team Lead

FROM: Wayne H. Western, Environmental Scientist III/Engineering
Peter H. Hess, Environmental Scientist III/Engineering Team Lead

RE: 2004 Midterm Review, Canyon Fuel Company, LLC., SUFCO Mine, C/041/002,
Task ID #2363

SUMMARY:

The Division conducted a midterm review for the SUFCO mine as required by R645-303-211.

TECHNICAL ANALYSIS:

OPERATION PLAN

SUBSIDENCE CONTROL PLAN

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

Analysis:

Subsidence Control Plan

The Division generated a deficiency relative to R645-301-121.200 in the review generated for Task ID #2068 (Task ID #2325). That deficiency stated that:

TECHNICAL MEMO

- 1) The Permittee must state when (specific years) the color infrared aerial photographs will be taken;
- 2) The location of where infrared aerial photographs can be found;
- 3) When (specific years) the bi-annual monitoring program for the West Fork of Box Canyon will be performed;
- 4) Where the information from the bi-annual monitoring program for the West Fork of Box Canyon can be found.

The Permittee responded to these requirements with the Task ID #2363 submittal on September 6, 2005 by making appropriate changes to text in Chapter 5, pages 5-29, 5-30, and 5-39.

Text changes/additions to page 5-29 include the following, “The CIR (color infrared) photographs are stored at the SUFCO Mine”. This addresses requirement #2 above. “The next projected CIR flight dates will be in 2008, 2013, and 2018.” This addresses requirement #1 above.

Page 5-30 had text changed in the following manner; the approved bi-annual monitoring program whose purpose is to analyze the subsidence cracks related to the undermining of the West Fork of Box Canyon is being proposed to be modified. The Permittee is proposing to reduce the frequency of this monitoring plan from bi-annual to **once-every-other-year**. The Permittee has not provided any justification to the Division to allow for a means to determine that a reduction in monitoring frequency is justified.

The Permittee responded to this concern on November 22, 2005, by submitting a revised page 5-30, paragraph 4. The Permittee has proposed to reduce the frequency of monitoring the subsidence cracks in the West Fork of Box Canyon from bi-annual (twice a year) to annual monitoring. Secondary coal extraction under the West Fork of Box Canyon was completed in 1999 (conversation with Mike Davis, SUFCO Mine on November 22, 2005). It is common knowledge that ninety percent of subsidence occurs within the first nine to twelve months after secondary extraction has been completed in an area. Therefore, the Division and the surface management agency (USFS) feel that the reduction in monitoring frequency from bi-annual to annual is justified for subsidence monitoring in the West Fork of Box Canyon. Annual reporting of subsidence monitoring is required for all underground coal mines in the State of Utah.

The final condition required under this section in the review designated, Task ID #2325 is that the Permittee must state where the monitoring information for the subsidence cracks in the West Fork of Box Canyon can be found. The Permittee has responded to these requirements by modifying the text in Chapter 5, page 5-39 in the following manner; “Subsidence cracks in the area of the West Fork of Box Canyon were surveyed for their location. However, in the year 2000 and 2002 the width and/or offset of the cracks were not measured or the records were not

TECHNICAL MEMO

kept. Width and/or offset measurements were made in the fall of 2004 and will again be made in the fall of 2005 and every other year thereafter. The records are available at the mine.”

This closing statement meets the requirement of stating where the subsidence crack monitoring information can be reviewed. However, the Permittee submitted a revised page 5-39 on November 22, 2005, which makes the following commitment; “The West Fork of Box Canyon subsidence monitoring for cracks “will be reported in the Mines annual report”.

SUFACO committed to include the following in the annual report:

- A subsidence map showing the areas where subsidence occurred and the amount of subsidence. The map will include all areas where subsidence occurred during the past three years.
- A narrative stating what subsidence activities occurred that year.
- A history of subsidence at the SUFACO mine.
- Color infrared photographs of the mine site will be taken at least once every five years.
- Conduct an annual monitoring program to analyze the subsidence cracks related to the undermining of the West Fork of Box Canyon. The monitoring program will include measuring the offset and/or width of portions of selected subsidence cracks. Similar data will also be collected from specified segments of subsidence cracks that occurred away from the walls of the canyon and do not appear to be influenced by the lack of bedrock support created by the canyon.

Findings:

The information provided in the MRP is considered adequate to meet the requirements of this section.

BONDING AND INSURANCE REQUIREMENTS

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

Analysis:

Determination of Bond Amount

The list of deficiencies generated by the Division through Task ID #2325 generated the following relative to the amount of reclamation bond in place for the SUFACO Mine.

TECHNICAL MEMO

R645-301-830.140; “The Permittee must give the Division updated copies of the detailed reclamation cost estimate. The Division will give the Permittee copies of the updated reclamation cost estimate upon request in either paper or electronic format.”

The Permittee’s response to this deficiency was that the deficiency had already been addressed within the permit. The reclamation cost estimate data had been submitted with a previous submittal and approved/incorporated into the MRP July 26, 2005.

Thus, the Permittee has met the requirements of the R645 Rules for this section. The Permittee included a copy of the reclamation cost estimate that was approved by the Division for incorporation into the MRP.

The Division estimates the cost to reclaim the SUFCO mine at \$2,616,000 in 2009 dollars. The current bond is for \$4,439,000, which is \$1,823,000 over the required amount. Thus, the reclamation bond that is in place has been determined to be adequate to ensure reclamation of all disturbed areas in the event of forfeiture.

Findings:

The information provided in the MRP is considered adequate to meet the requirements of this section.

RECOMMENDATIONS:

The Division should approve the amendment.