



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
 P.O. Box 45155
 Salt Lake City, UT 84145-0155
 www.ut.blm.gov

IN REPLY REFER TO:
 3480
 (UT-923)
 UTU-76195

SEP 17 2003

Jacobs
 9/04/003

Mary Ann Wright
 Utah Division of Oil, Gas, and Mining
 P.O. Box 145801
 Salt Lake City, Utah 84114-5801

Re: Undermining East Fork of Box Canyon Amendment, Canyon Fuel Company, SUFCO Mine, C/041/0002, Task ID #1640, Outgoing File, Monitoring and Mitigation Plan Comments.

Dear Ms. Wright:

We have reviewed your letter dated September 9, 2003 to provide comments on the monitoring and mitigation plan for the protection of the stream channel in East Fork of Box Canyon that will be undermined by the 3LPE and 4LPE panels. Below are our comments on your plan.

Subsidence R645-301-525.454

- **Condition 1(b) - Establish approximately 10 stations to show stream flow, vegetation, soils, etc.**

COMMENT: The total distance of stream channel over 3LPE and 4LPE panels is a little over 5,800 feet. Only about 2,200 feet of the stream channel over 3LPE is a perennial stream. The remaining stream channel contains an ephemeral stream or is dry. Rather than specify a number of monitoring stations, DOGM should identify the performance standards the monitoring should achieve (i.e. the monitoring should be sufficient to characterize stream flow over the perennial portion of the stream and identify changes in the nature of this flow). The monitoring plan should also ensure that the stream flow is monitored over the gateroads where the potential for surface cracks is greatest. Based on observations from other areas that have been undermined, surface cracks can occur inside the panel as far as 100 feet from the gateroads.

RECEIVED
 SEP 18 2003
 9/18/03
 MWS
 DIV. OF OIL, GAS & MINING

BLM is primarily concerned with how the surface effects of subsidence will affect the stream channel. BLM would prefer to have a series of monitoring points established over the 3LPE panel stream channel area to be able to characterize the changes to the surface as the area is undermined. Points could be set up about 100 feet apart on both sides of the stream to determine convergence of the stream channel. We would also like to see monitoring points established above the stream channel from each of the convergence monitoring points. The monitoring points would have to be surveyed to identify the x and y coordinates along with the elevation. Because the 3LPE panel is expected to be mined in the winter, the monitoring points would need to be resurveyed as soon as the weather would allow. Flow stations could be set up to coincide with some or all of the convergence points. By being able to identify where the greatest surface movement has occurred, the mine should be able to identify areas where surface cracks are most likely to occur and take appropriate mitigation if the stream is impacted. The monitoring points should start and end some distance from the edge of the gateroads.

- **Condition 3 - While mining under the channel, promptly identify subsidence activity in stream channels.**

COMMENT: BLM suggests that you clarify what is meant by "subsidence activity". This should include but not be limited to cracking, stream clogging etc.

- **Condition 5 - Immediately seal subsidence cracks and fractures identified within the stream wet back with bentonite or bentonite grout.**

COMMENT: BLM suggests adding, "or other materials approved by the Regulatory Authority".

- **Condition 6 - Conduct uninterrupted longwall mining progression, except for normally scheduled maintenance and down shifts, while under the 15 degree angle of draw of the stream channel.**

COMMENT: Normally, SUFCO has a longwall shift that goes Sunday, 10:30 p.m. until Saturday, 8:30 a.m.. BLM feels that this down time will not allow the shields to load up indicating extensive pressure are being created due to down time.

- **Condition 7 - Supply a weekly report to DOGM of activities . . .**

COMMENT: DOGM should specify the time interval when this report is due.

- **Condition 8 - If the applicant cannot gain access to the site, attempts must be documented:**

COMMENT: Access to the site may not be the only issue. Access may be gained by snowmobile but if the stream is frozen or it is covered in snow, not much may be observed.

Hydrologic Subsidence Summary Report:

BLM recommends that the report include a summary of subsidence observed effects along the stream channel in addition to the other items in the report. This condition states that the report will be due 90 days after subsidence monitoring is complete. When does DOGM consider subsidence monitoring is complete?

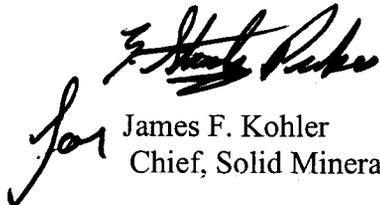
Vegetative Mitigation Plan:

The terms stream channel, and the riparian channel should be clarified. "Typically, the riparian vegetation occurs in a 'strip' above the level of the stream channel, and appears to be supported more from flow through colluvial materials than from stream flows". (PINES FEIS pgs. 3-103-104). It also appears that the requirement for the vegetation report could be required after the hydrologic report. If there are no changes to the hydrology, or if the mitigation is successful why is vegetative monitoring still required?

Qualified botanist must survey the riparian area starting from Joes' Mill Pond to the 3LPE west gateroad.

Does this refer to all riparian vegetation or is this only the vegetation supported by the stream.

If you have any questions feel free to contact Mr. Stan Perkes at 801-539-4036.


James F. Kohler
Chief, Solid Minerals Branch

cc: PFO