



## State of Utah

### Department of Natural Resources

MICHAEL R. STYLER  
*Executive Director*

### Division of Oil, Gas & Mining

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*Division Director*

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*Governor*

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*Lieutenant Governor*

May 22, 2006

Ken May, General Manager  
Canyon Fuel Company, LLC  
397 South 800 West  
Salina, Utah 84654

Subject: Material Damage Finding, North Water Spring (Pines 105), Canyon Fuel Company, LLC, SUFCO Mine, C/041/0002, Outgoing File

Dear Mr. May:

The Division was recently notified by Canyon Fuel Company, LLC (CFC) that subsidence-related surface cracking had occurred above the underground longwall panels (undermined December 2005) located in the vicinity of the developed North Water Spring (Pines 105). On May 11, 2006, a joint agency field inspection was performed of the affected area. Representatives from CFC, the Manti La Sal Nation Forest, the Bureau of Land Management, the Emery Livestock Association and the Division of Oil, Gas and Mining were in attendance.

The field investigation confirmed that surface cracking had occurred. It was also determined that there was no measurable discharge occurring from the North Water Spring (Pines 105). This developed spring is monitored as part of SUFCO's required water monitoring program and is recognized as an important water source for local wildlife and cattle that graze in this area.

Based upon a preliminary assessment of the onsite conditions and available spring monitoring data, mining-induced subsidence has resulted in the loss of flow from this spring and a finding of material damage is evident (see attached finding). In accordance with R645-301-525.500, it is CFC's responsibility to repair the damage to this feature (spring) in order to restore the land to a condition capable of maintaining the value and uses that it was capable of supporting before the subsidence damage occurred.

Therefore, the Division will require the following information from CFC to address this matter:

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1. A temporary/interim plan to mitigate and restore the land to a condition capable of supporting its pre-mining use. This plan should describe the water source, the volume and quality of water that will be provided to replace the spring flow that would normally be available for wildlife and domestic livestock use. The plan should also describe when it will be implemented, what clearances or permits are required from other regulatory agencies, and the anticipated duration of the temporary mitigation plan.
2. A schedule for submittal of a permanent plan to restore the essential long-term function of the spring and associated riparian area, to insure that water is available in sufficient quality and quantity to replace the water that has been lost or displaced.
3. A plan to repair the subsidence-related surface cracks that threaten the safety of the general public, the wildlife and cattle that use this area.

Because of the upcoming transfer of about 1300 head of cattle onto this Forest Service grazing allotment, the information for items 1 & 3 must be received no later than June 2, 2006, and item 2 by July 21, 2006.

If you have any questions or concerns regarding this letter, please call me, at (801) 538-5286, or Steve Fluke at (801) 538-5259.

Sincerely,

D. Wayne Hedberg  
Permit Supervisor

an  
cc: Mary Ann Wright, OGM  
Jim Kohler, BLM (SLO)  
Steve Rigby, BLM (PFO)  
Alice Carlton, USFS (Price)  
Mesia Nyman, USFS (Ferron)  
Jerry Olds Water Rts.  
Sherrel Ward, HCIC  
Russ Jensen (Emery Livestock Assoc)  
Derris Jones, DWR  
Price Field Office

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# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

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May 19, 2006

TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor *DWH*

FROM: ~~Steve Fluke~~, Reclamation Hydrogeologist  
*SFR*

RE: Finding of Material Damage to Spring Pines 105 (North Water Spring), Canyon Fuel Company, LLC, (CFC), SUFCO Mine, C/041/0002

The intent of this memo is to document events and provide background and relevant information in order to qualify the damage caused by subsidence-induced fractures in the North Water Spring area within the SUFCO Mine permit. The North Water Spring is a developed spring located in the East Fork of the East Fork of Box Canyon (EFEFB) above panel 5L of SUFCO's Pines Tract. The SUFCO Mine conducted longwall mining of panel 5L during the winter of 2005 and beneath the North Water Spring in December 2005. Following winter snowmelt, SUFCO personnel conducted a field inspection in April 2006 of the area and observed surface fractures in the vicinity of the North Water stockwatering troughs. In addition, it appeared that flow was diminished at the North Water Spring (Pines 105), although the spring was reportedly still partially snow covered. Canyon Fuel Company, LLC (CFC) subsequently notified the Division and arranged a joint agency field inspection of the impacted area.

## FIELD VISIT OBSERVATIONS

On May 11, 2006, personnel representing CFC (Chris Hansen, Mike Davis, Erik Petersen), the Manti-La Sal Forest Service (Dale Harber, Tom Lloyd, Lance Sedweeks, Don Wilcox, and Jeff Alexander), the BLM Price office (Steve Falk, Steve Rigby, and Zach), the Emery Livestock Association (Russ Jensen), and the Division of Oil, Gas & Mining (the Division) (Pete Hess and Steve Fluke) met to conduct a joint agency field inspection of the North Water Spring area. We observed surface fractures north and south of the spring on the plateau above the EFEFB canyon trending toward the spring, but not in the canyon bottom where the spring is located. The fractures were up to two-feet wide and to an undetermined depth. No flow was observed at the North Water spring box during the visit. The riparian area around the spring contained standing water and dispersed flow estimated at one to two gallons per minute (gpm).

### MONITORING DATA

The North Water Spring is monitored as part of the SUFCO Mine's operation water monitoring plan (as spring Pines 105) and by the Emery Water Conservancy District (EWCD). A flow meter, located at the spring box, is maintained by EWCD and downloads flow rates hourly through telemetry to the EWCD website during the summer months. SUFCO has measured flow and field parameters quarterly at the spring box since 1997. The Division does not currently have access to all of the past EWCD flow data, but the past two years (2004 and 2005) generally correspond with the SUFCO flow measurements. Based on SUFCO flow measurements from 1997 through 2005, average flow at the spring is 6.5 gpm with minimum and maximum flow rates of 2.6 and 12.0 gpm, respectively. Water quality is considered good with measured average conductivity since 1997 reported at 194.6 micro-mhos per centimeter (umhos/cm).

### WATER USE

The North Water Spring is an important water source for stockwatering in addition to supporting wildlife and riparian vegetation. During years when grazing is allowed in the allotment, water in the riparian area near the spring is captured and pumped to troughs on the plateau approximately 60 feet above the EFEFB canyon bottom. Reportedly, the solar-powered pump can pump at a maximum rate of 6 to 8 gpm, with a conservative average flow of 5 gpm/day. Based on the average flow rate, the spring is capable of providing 7,200 gallons per day (gpd) for stockwatering.

### WATER RIGHTS

No State-appropriated water rights are currently adjudicated for the North Water Spring. I met with Emily McMurtrey of the Utah Division of Water Rights to discuss the water rights in the Emery allotment area. According to Ms. McMurtrey, it appears that individual water rights for the Emery allotment are combined in Supplemental Group No. 618240 for the use of stockwatering a total of 1,367 stock units. For some unknown reason, the North Water spring was not included in the 1981 inventory for this group. Because the North Water spring is not State-appropriated water, then R645 rules requiring replacement of water rights do not apply (R645-731.800).

### FINDING

Based on post-mining field observations, historical data, and the coincidence of the North Water Spring loss of flow and longwall mining beneath the spring, the Division concludes that longwall mining of SUFCO's 5L panel damaged the spring causing a diminution of water. Because replacement of the diminished water is not covered by water replacement rules (R645-731.800), then material damage resulting from subsidence can apply. Material damage includes:

“any functional impairment of surface lands, features, structures, or facilities; and any physical change that has significant adverse impact on the affected land’s capability to support any current or reasonably foreseeable uses or causes significant loss in production or income” (R645-100). In this case, the current or reasonably foreseeable use of the land is stockwatering and maintaining wildlife habitat.

Because the diminution of the North Water Spring is a functional impairment of surface lands through the adverse impact on the lands capability to support stockwatering and wildlife habitat, the Division finds that material damage has occurred. In accordance with R645-525.510, the Permittee must “restore the land to a condition capable of maintaining the value and reasonably foreseeable uses that it was capable of supporting before subsidence damage”. This finding does not preclude any additional findings of material damage in the North Water Spring area due to further studies.