



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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RECEIVED

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Ref: 8EPR-EP

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EIS Team Leader  
Manti-La Sal National Forest  
599 West Price River Drive  
Price, Utah 84501

Jim Kohler  
Bureau of Land Management  
Utah State Office  
324 State Street, Suite 301  
Salt Lake City, Utah 84111

Re: Flat Canyon Coal Lease Tract - Skyline Mine  
Expansion, DEIS

Dear Messrs. Carter and Kohler:

This letter is in follow-up to EPA's June 28, 2001 comment letter on the Flat Canyon DEIS and site visits to the fen in upper Boulger Canyon on July 26, and August 8, 2001 by Dana Allen and Mike Wireman with EPA. We appreciate the arrangements the agencies made for the site visits of the fen and the area which had subsided under previous mining. As discussed in our meeting and site visits, fens are unique, irreplaceable wetlands. More information is needed to confirm this wetland is a fen and determine the potential impacts of subsidence. We have the following recommendations for further investigations of the fen regarding ground water hydrology and ecology.

1. It is important to establish the geologic source of the springs that contribute water to the fen in the upper Boulger Creek watershed. There are at least three springs which discharge above the fen and drain into and through the fen area. These springs discharge from either the Castlegate sandstone or the upper part of the Blackhawk Formation (Fm). [The two major coal seams are in the lower part of the Blackhawk Fm.] Mike Wireman's field observations indicate that at least one of the springs may discharge from the Castlegate/Blackhawk contact and the other two may discharge from sand facies units in the upper Blackhawk Fm. This is important, because the Castlegate Fm. is less likely to be impacted by subsidence than the Blackhawk. As discussed with Mike Wireman, water chemistry and field hydrogeologic mapping can be used to make this determination.
2. We recommend that at least one nested pair of piezometers be installed near the center of the fen area (depending on accessibility). These piezometers would serve two functions:

*Copy to Carter, Reed, Mike  
Done 8/28/01*

*original to Paul  
done copies to MAW & Damon*

*1/007/005*

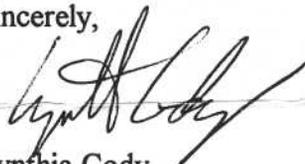
*Jacobs*

(a) determination of the vertical gradient (direction and magnitude) of ground water head within the fen and (b) long-term monitoring of head conditions, especially if the fen may be impacted by subsidence from mining. Data from the piezometers would help answer the questions as to whether there is an upward movement of ground water into the bottom of the fen area. This is important, because any upward discharge of ground water would be ground water contained in the Blackhawk Fm (which the fen overlies). Fen viability is very sensitive to changes in head.

3. We also recommend that a fen expert visit the site to determine if the wetland is truly a fen based on ecological/botanical criteria. As you recall, wetlands including fens are defined through three parts - hydrology, soils and vegetation. The soil and hydrology components of defining a fen are progressing. However, it appears that additional information is needed to evaluate the vegetation in the fen and take into account how grazing and other uses may have affected the plant community. Fens may also provide habitat for rare flora and fauna.
4. Depending on the level of documentation needed for each agency's decision, the Forest Service and BLM may want to collect additional information on the soil classification. Although we did not have a wetlands delineation expert at our site visits, it appears there was general agreement between agencies that the soils in this fen area were more than 18 inches of peat. We also noted the "bounce" and hollow sound when walking over the fen area which are also indicative of peat.
5. There are sheep grazing in the fen area. This area is a good candidate for reducing or eliminating grazing during the upcoming reevaluating of grazing practices on the forest.

If you have any questions about these comments please contact Dana Allen at (303) 312-6870 or Mike Wireman at (303) 312-6719. We appreciate your interest in our comments.

Sincerely,



Cynthia Cody  
Director, NEPA Program  
Office of Ecosystems Protection  
and Remediation

cc: Mike Suflita, DOGM ✓