

1-12-2013

Alabama Surface Mining Commission
Attention: Ann Miles
P.O. Box 2390
Jasper AL 35502

RE: The petition under consideration to designate lands along the Mulberry Fork in the vicinity of the Birmingham Water Works Board's Mulberry drinking water intake as Lands Unsuitable for Mining (LUM).

Dear Ms. Miles,

I believe the Alabama Surface Mining Commission should carefully consider the current LUM petition. In particular, I believe a thorough evaluation of the drinking water quality and health effects of surface mining along Mulberry Fork is necessary for an informed decision to be made. Adequate water quality data, particularly heavy metal levels, and health effect estimates data have not been presented.

Numerous peer-reviewed scientific studies have characterized the water quality and health effects of surface mining in Ohio, Pennsylvania, West Virginia, and Tennessee (1-5). The studies are particularly relevant for the current situation because they show: 1) Before and after studies conducted by the United States Geological Survey in Ohio showed in three cases aquifers exceeded USEPA drinking water limits for dissolved sulfate, iron, and manganese after surface mining, whereas prior to surface mining they did not exceed these limits (1); 2) Coal mining is associated with heightened USEPA drinking water violations in West Virginia (2) and 3) Several correlational studies, although not definitive, suggest there may be increased incidences of health problems in communities around surface mining (3,4).

I encourage ASMC to carefully consider the environmental, health, and economic implications of surface mining at Mulberry Fork. A full hydrological, geological, and economic technical study was completed to address a similar petition in Pennsylvania (5). A full site-specific study that also includes a health impact assessment would be prudent in light of the above studies suggesting health effects and reduced drinking water quality at other surface mining sites.

References:

1) Eberle, M and AC Razem. 1985. Effects of surface coal mining and reclamation on groundwater in small watersheds in the Allegheny Plateau. U.S. Geological Survey Water Resources Investigations Report 85-4205.

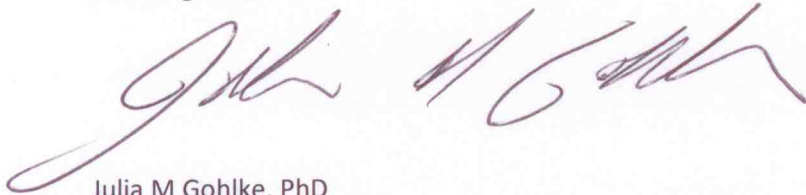
2) Hendryx M, F Fulk, A McGinley. 2012. Public Drinking Water Violations in Mountaintop Coal Mining Areas of West Virginia, USA. *Water Quality, Exposure, and Health* Vol 4 (3) pp 169-175.

3) Hitt, NP and M Hendryx. 2010. Ecological integrity of streams related to human cancer mortality rates. *EcoHealth* Vol 7, Issue 1 pp 91-104

4) Paul R. Epstein, Jonathan J. Buonocore, Kevin Eckerle, Michael Hendryx, Benjamin M. Stout III, Richard Heinberg, Richard W. Clapp, Beverly May, Nancy L. Reinhart, Melissa M. Ahern, Samir K. Doshi, and Leslie Glustrom. 2011. Full cost accounting for the life cycle of coal in "Ecological Economics Reviews." Robert Costanza, Karin Limburg & Ida Kubiszewski, Eds. *Ann. N.Y. Acad. Sci.* 1219: 73–98.

5) Technical Study for a Petition to Designate Areas Unsuitable for Mining, Muddy Run Watershed, Cambria County. Pennsylvania Department of Environmental Protection and Bureau of Mining and Reclamation. Division of Environmental Analysis and Support.

Best Regards,

A handwritten signature in dark ink, appearing to read 'Julia M Gohlke', written in a cursive style.

Julia M Gohlke, PhD
Assistant Professor
University of Alabama at Birmingham