313 Lucerne Boulevard
Homewood, Alabama 35209

29 January 2013

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

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

Dear Ms. Miles,

As a citizen, a scientist, and a consumer of water form the Birmingham Water Works, I am deeply concerned about maintaining the integrity of the water resources upstream of the Birmingham Water Works Board's Mulberry Fork drinking water intake. The prudent approach to drinking water resources is to protect them from possible degradation as remediation is expensive, time consuming, and substantively ineffective.

It is well established that coal and pyrite in the Warrior fields contain mercury, arsenic and other trace elements hazardous to human health[1]. Mercury has complex neurological and developmental effects in humans from either inhalation or ingestion[2]. Mercury toxicity is complicated in water, as it may be transformed to methylmercury and concentrated in the food chain. Those whose diets contain fish exposed to mercury put themselves and their developing fetuses at risk[2,3]. Arsenic in drinking water causes cancers and correlates to increased morbidity due to hypertension, cardiovascular diseases, and diabetes[4].

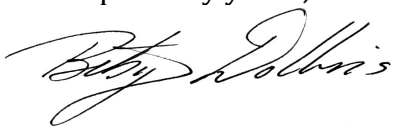
Coal mining itself is associated with decrements in public health. West Virginia counties with greater coal mining activity had significant increases in not only pulmonary disease, but also heart disease, hypertension, diabetes, and kidney disease[5]. Equally as disturbing, birth defects were 27% greater in counties with coal mining and 63% greater in counties with mountaintop removal than in West Virginia counties without coal mining[6].

The primary means by which coal derived environmental toxins enter the water supply is runoff from mines, mine debris, and overburden and overflow from passive containment systems[7,8]. Stream sediments adjacent to coal mines in Alabama are enriched in Arsenic compared to non-mining areas[1].

Before allowing mining operations in a sensitive zone, it is imperative that there are systematic investigations to understand the migration of leached material from mine sites and detention ponds to nearby streams. Such studies must encompass all seasons and weather events. Episodic coal mine drainage pollution has as significant an impact on benthic macroinvertebrate populations as chronic drainage pollution, even 5 miles downstream from mine discharge sites[8]. It is critical for public health to establish whether coal mine drainage has similar episodic and distance effects on human health.

In West Virginia, a stream classification system was developed from extensive water quality sampling in a watershed with active and abandoned coal mines[9]. The establishment of discrete water quality types and zones would allow the surface mining commission to confidently make decisions based on relevant science. Until then, it is imperative that we protect our precious water resources with a ban on mining on all lands within a minimum of 5 stream miles upstream of any drinking water intake.

Respectfully yours,



Betsy Dobbins, Ph.D.

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