

BEFORE THE ALABAMA SURFACE MINING COMMISSION

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A Petition to Designate Lane Adjacent to the)
Mulberry Fork of the Black Warrior River)
as Unsuitable For Coal Mining)
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INTERVENTION AND PETITION

COMES NOW, the Intervenor/Petitioner, The Water Works Board of the City of Birmingham (hereinafter “BWWB”) (the BWWB being located at 3600 First Avenue North Birmingham, Alabama, 35222 with a telephone number of (205) 244-4403), in accordance with Ala. Admin. Code r. 880—X-7A-.05 and 880-X-7D-.06, and hereby files its intervention in support of that certain Petition to Designate Land Adjacent to the Mulberry Fork of the Black Warrior River as Unsuitable for Coal Mining that was filed by the Black Warrior Riverkeeper (the “Petition”) and further asserts its own grounds to have certain lands declared unsuitable for coal mining. The Petition was filed on September 10, 2012, and is presently pending before the Alabama Surface Mining Commission (hereinafter “ASMC”). The Petition seeks to designate as certain lands unsuitable for surface coal mining operations. The BWWB incorporates and supports the Petition in its entirety.

Surface mining in the described area of the Petition and this Intervention represents a threat to the source drinking water provided by the Mulberry Fork of the Black Warrior River and the ASMC should designate those areas as lands unsuitable for mining under Ala. Admin. Code r. 880-X-7A-.05.

BWWB also petitions the ASMC to designate additional lands that drain to those portions of the Mulberry Fork that constitute the “Public Water Supply” and drain into the BWWB’s source water protection area (SWPA) as lands unsuitable for mining under Ala. Admin. Code r. 880-X-7A-.05.

I. INTRODUCTION

The BWWB owns and operates a water intake along the Mulberry Fork of the Warrior River. This intake facility is commonly referred to as the Mulberry Intake. Water discharged from surface mines would enter the Mulberry Fork near the Mulberry. The Mulberry Intake is rated to withdraw between 65 and 85 million gallons of water per day (“MGD”) from the Warrior River. Water withdrawn from the Warrior River is pumped to the western part of the Birmingham area to be treated by the BWWB’s Western Filter Plant. The Western Filter Plant can treat up to 60 MGD. Water from the Western Filter Plant is then distributed to the BWWB’s service area west of U.S. Interstate 65 as far north as the Towns of Kimberly and Warrior, the Cities of Gardendale, Fultondale, parts of the Cities of Homewood, Hoover and Vestavia as well as downtown Birmingham. Customers that use the potable water produced by the Western Filter Plant include individual residences, hospitals, kidney dialysis facilities and other businesses. In all, approximately 200,000 Alabama citizens drink water withdrawn from the Warrior River by the Mulberry Intake and treated by the Western Filter Plant. The Mulberry Fork of the Black Warrior River is designated “Public Water Supply” from the junction of the Locust and Mulberry Forks past Burnt Cane Creek (9 miles below Cordova) and Frog Ague Creek, to the junction of the Sipsey and Mulberry Forks. *See* Ala. Admin. Code r. 335-6-11-.02. Water discharged from any proposed mine from the junction of Blackwater Creek and the Mulberry Fork to an area

between the Mulberry Intake and Burnt Cane Creek (9 miles below Cordova) will have the most significant impact on the operation of the Mulberry Intake.

ASMC Permit P-3945 to Shepherd Bend LLC and ASMC Permit P-3957 to Reed Minerals No. 5 are currently being challenged by the BWWB and therefore are not yet final permits.

The proximity of these proposed mining operations to such a major municipal water supply represents an incompatible use. This operation could result in discharge of mining related pollutants directly to the intake. Proposed ASMC permits for the Shepherd Bend and Reed Minerals No. 5 mines have not adequately considered the drinking water use of the BWWB, and are wholly inadequate to protect the BWWB and its customers from many pollutants commonly associated with mining activities.

The receiving waters at issue in the Petition are considered source drinking water by the State's Water Use Classifications (*see generally* Ala. Admin. Code r.335-6-10) as well as the BWWB, and they are designated for special scrutiny and protection as a SWPA (*see generally* Ala. Admin. Code r.335-7-15). State law includes an anti-degradation policy, which is designed to maintain water quality to fully protect existing uses. *See* Ala. Admin. Code r. 335-6-10-.04. The BWWB deems the areas covered by this Intervention to be renewable resource lands in which the operations could result in a substantial loss or reduction of long range productivity of water supply. Accordingly, the BWWB asserts that all of the area along the section of the Mulberry Fork designated "Public Water Supply" and contributing to the SWPA should be considered part of the SWPA.

In addition to the possible contamination of surface water flowing to the Mulberry Fork intake, the pollution of groundwater in the area of the proposed mines is also a major concern.

The groundwater underlying the areas adjacent to the Mulberry Intake is in direct hydraulic communication with surface water in the Mulberry Fork. Consequently, contaminants introduced into groundwater from mining operations will discharge to the Mulberry Fork. Further, the groundwater directly underlying the area is designated as an Underground Source of Drinking Water (USDW) by ADEM. Admin. Code r. 335 Division 6 Regulations, defines an aquifer or portion thereof: 1) which currently supplies drinking water for human consumption, or 2) in which the ground water contains fewer than 10,000 mg/L of total dissolved solids.

Whether by direct discharge to surface water or through infiltration into groundwater, surface coal mining in the designated areas will substantially harm the source drinking water provided by the Mulberry Fork.

Numerous individual residents and drinking water customers have expressed opposition to the location of surface coal mining operations in close proximity to source drinking water. On behalf of their many residents served by the Mulberry Fork drinking water intake, the Birmingham City Council has passed unanimous resolutions opposing Shepherd Bend and Reed No. 5 mines. See Exhibits A and B. The following organizations, groups and businesses have also expressed opposition to Shepherd Mine because of the impact it will have on source drinking water and drinking water treatment: Alabama Environmental Council, Alabama Rivers Alliance, Avondale Brewing Company, Birmingham Audubon Society, Cahaba Brewing Company, Cahaba Riverkeeper, Cahaba River Society, Coalition of Alabama Students for the Environment, Choctawhatchee Riverkeeper, Citizens Opposed to Strip Mining on the Black Warrior River, Coosa Riverkeeper, enAct, Episcopal Diocese of Alabama's Task Force for the Stewardship of Creation, GASP, Glen Iris Neighborhood Association, Greater Birmingham Ministries, Green Initiative at UAB, Good People Brewing Company, Hurricane Creekkeeper,

League of Women Voters of Alabama, Metro-Birmingham NAACP, Mobile Baykeeper, Montevallo Environmental Club, Occupy Birmingham, Patriots for Conservation, Restoring Eden at Samford, Southern Environmental Law Center, Tennessee Riverkeeper, UA ECo, UA NAACP, UA Student Government Association, UAB Student Government Association, Waterkeeper Alliance, and Wild South.

With respect to Reed No. 5 Mine, the following organizations, groups and businesses have expressed their opposition: Alabama Environmental Council, Alabama Rivers Alliance, Beth Maynor Young Conservation Photography, Birmingham Audubon Society, Birmingham City Council, Blue Horizon Enterprises, Coalition of Alabama Students for the Environment, Citizens Opposed to Strip Mining on the Black Warrior River, Coosa Riverkeeper, Friends of the Locust Fork River, Good People Brewing Company, Green Initiative at UAB, League of Women Voters: Birmingham Chapter, Montevallo Environmental Club, Occupy Birmingham, Patriots for Conservation, Public Health Student Association at UAB, Restoring Eden at Samford, Ruffner Mountain Nature Center, Sierra Club: Alabama Chapter, UA ECo, UAB Student Government Association, Tennessee Riverkeeper and Wild South.

Despite the extensive coal mining that has occurred in the area both currently and historically, there has never been a comprehensive evaluation of the cumulative impacts of mining on source drinking water in the Mulberry Fork, nor any meaningful consideration of how the operations of two (or even more) additional mines will further contribute to these impacts. Just as importantly, there have never been any scientific studies of how concentrated coal mining along the Mulberry Fork may affect the health of those who live nearby or who rely on this intake for their drinking water. It is past time for these kinds of studies to be conducted and

incorporated in decisions about where and under what circumstances coal mining could occur along the Mulberry Fork when the integrity of source drinking water is at stake.

Even if surface mines are permitted in this area with the best of regulatory intentions, permit exemptions exist which suspend supposedly protective permit limits in their entirety during certain rain events. Unfortunately, there is no consideration or plan provided in the existing regulatory framework of how (when unregulated discharges or a catastrophic event occurs) source drinking water and public health will be preserved and protected.

II. BACKGROUND

Congress passed the Surface Mining Control and Reclamation Act of 1977 (SMCRA) (30 U.S.C. § 1201 et seq.) to "establish a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations." 30 U.S.C. § 1202(a). SMCRA further provides that the Secretary of the Interior or the relevant state authority, depending on which entity is responsible for the enforcement of SMCRA in the particular region, has discretion "[u]pon petition pursuant to subsection (c) of this section, [to] designate an area as unsuitable for all or certain surface coal mining," id. § 1272(a)(2), where surface mining is

- incompatible with existing state or local land-use plans;
- affects fragile or historic lands on which such operations could cause significant damage to important historical, cultural, scientific and aesthetic values and natural systems;
- affects renewable resource lands (such as forest lands and farmland); or
- affects natural hazard lands such as lands prone to earthquakes.

30 U.S.C. § 1272(a)(3)(A)-(D). On May 20, 1982, the ASMC achieved primacy under SMCRA and assumed responsibility for the regulation of coal mining operations in Alabama, including the process for designating lands unsuitable for mining.

The ASMC process for designating lands unsuitable for mining is codified at Ala. Admin. Code r. 880-X-7A-.01 through 880-X-7D-.11. The ASMC must designate lands unsuitable for mining if “reclamation is not technologically and economically feasible under the Act.” Ala. Admin. Code r. 880-X-7C-.04(1). The ASMC may (but is not required to) designate an area if it meets certain other requirements. Ala. Admin. Code r. 880-X-7C-.04(2).

Specifically, areas that “affect renewable resource lands in which such operations could result in a substantial loss or reduction of long-range productivity of water supply” are eligible. *See* Ala. Admin. Code r. 880-X-7C-.04(2)(c). ASMC regulations do not define “renewable resource lands” but regulations developed under SMCRA do. They are “geographic areas which contribute significantly to the long-range productivity of water supply or of food or fiber products, such lands to include aquifers and aquifer recharge areas.” 30 C.F. R. § 762.5. Courts have looked at protection of drinking water as a valid reason to consider the lands unsuitable designation. *See, e.g., Pleasant City v. Ohio DNR*, 617 N.E.2d 1103 (Ohio 1993); *Appollo Fuels, Inc. v. US*, 381 F. 3d 1338 (D.C. Cir. 2004).

The only areas potentially excluded from the lands unsuitable for mining petition process are lands covered by a permit or lands where, *prior to the passage of SMCRA*, significant legal or financial commitments had been made or actual mining was occurring. *See* Ala. Admin. Code r. 880-X-7C-.05(b). There are no time limits specified for when a petition must be filed. However, “[a]ny petitions received after *the close of the public comment period* on a permit application relating to the same permit area shall not prevent the State Regulatory Authority from issuing a

decision on that permit application.” Ala. Admin. Code r. 880-X-7D-.06(1)(g) (emphasis added). Moreover, the ASMC “may return any petition received thereafter to the petitioner with a statement why the State Regulatory Authority cannot consider the petition.” *Id.* That suggests that the converse is also true: as long as a permit has not been issued that covers the lands at issue *or* the public comment period is open, a petition to designate lands unsuitable for mining may be timely filed.

A petition to designate lands unsuitable for surface coal mining operations may be filed as a matter of right by “[a]ny person having an interest which is or may be adversely affected...” Ala. Admin. Code r. 880-X-7D-.05(1). This is the identical language that allows citizens to file public comments or request an informal conference on pending permit applications. *See* Ala. Admin. Code r. 880-X-8K-.05.2.(b) and 880-X-8K-.05.3. A petitioner is required only to provide:

- The location and size of the area covered by the petition;
- Allegations of facts and supporting evidence which would tend to establish that the area is unsuitable for all or certain types of surface coal mining operations;
- A description of how mining of the area has affected or may adversely affect people, land, air, water or other resources;
- The petitioner's name, address, and telephone number; and
- Identification of the petitioner's interest which is or may be adversely affected.

Ala. Admin. Code r. 880-X-7D-.05(1).

III. LOCATION AND SIZE OF THE PETITION AREA

The petition area included in this Intervention and Petition includes those areas more particularly described on the map attached hereto as Exhibit C.

IV. ALLEGATIONS OF FACT AND SUPPORTING EVIDENCE

The area covered by this Intervention and Petition is the area around the Mulberry Intake that presents the greatest risk for harmful impacts to the operation of the intake and the BWWB's treatment and distribution system. The Mulberry Intake has the capacity to pump water from the Mulberry Fork to the Western Filter Plant (WFP) at a rate of 85 million gallons per day (MGD), and is a critical part of the BWWB's system. The water from the intake is treated, using conventional treatment, at the WFP and distributed to approximately 200,000 BWWB customers in the western portions of the Birmingham metro area. The conventional treatment process consists of flocculation, coagulation, sedimentation, filtration, and disinfection processes, and is designed to remove organic matter and some inorganic precipitates (Exhibit D). The conventional treatment system is not designed to remove many metals and other toxic compounds.

The BWWB is regulated under the Clean Water Act (CWA) according to the treated water that it distributes to its customers. Maximum contaminant levels (MCL) are set by EPA and ADEM for a suite of primary and secondary contaminants; primary contaminants present human health impacts at their respective MCLs, and secondary contaminants present aesthetic impacts at their MCLs. Exhibit E is a table of contaminants commonly associated with mining activities and their MCLs. Given that limits exist for these contaminants in the treated water and the conventional treatment process's limitations, there is a maximum concentration that can be tolerated in the untreated water (raw water, Public Water Supply) coming from the Mulberry Fork. This tolerable concentration is codified as a Water Quality Standard (Ala. Admin. Code r. 335-6-10). From the experience of the BWWB and its engineers, the maximum tolerable concentrations for a suite of mining-related contaminants are given in Exhibit F. Without a

complete and proper investigation of the actual and potential cumulative discharges of the mines in the area of concern, the ASMC cannot ensure that the WQS for the PWS will be met. Contravention of these WQSs represents a significant adverse impact to the BWWB and loss of the productivity of this water supply.

The current state of the permitting process does not support a thorough investigation of potential contaminants or assessment of known contaminants. The regulations of the ASMC require certain background studies concerning the acid-forming potential and toxic-forming potential of the disturbed area, and the regulations have fairly robust requirements concerning the submission of operations and engineering plans. However, the information that is submitted for surface mining applications in this area does not meet these requirements, is typically based on insufficient quantities of data, and is typically limited to vague explanations and convenient assumptions of ideal performance. There are many studies that point to the impacts of surface coal mining on water quality, and support the need for a thorough review of site conditions and mining plans when a sensitive water resource is at stake.

The function of this section of the Black Warrior River makes it particularly sensitive to fluctuations in flow and contaminant loads. The river is governed by the operation of the Smith Dam to the north and the Bankhead Dam to the south, along with the seasonal variations of rainfall (Exhibit G). These factors yield situations where the river in this area is pooled, greatly reducing the flow past the intake, and where the river may reverse flow direction. The impact of these facts is that this intake is particularly susceptible to impacts from runoff-based contamination that lingers in the Bankhead Pool. The BWWB has first-hand experience with just this situation.

In the fall of 2006, the BWWB identified elevated levels of bromide in the Mulberry Intake supply as the culprit for high levels of disinfection by-products in their treated water. Disinfection by-products (DBPs) are regulated by EPA and ADEM, and their presence caused the BWWB to shut down the Mulberry Intake until the source could be removed. The BWWB undertook a sampling program to track the concentration of bromide up the Black Warrior River system, and ultimately located the source in Arab, AL some 90 miles upstream. The concentration was very low, about 50 parts per billion, but this small quantity was sufficient to preclude use of the source. After much work and litigation, the BWWB was able to remove this discharger as a source of bromide and the concentration of the contaminant began to decrease as the river flowed south. However, after the contamination had cleared in the upstream reaches of the system, it persisted in the Bankhead Pool. The function of this section of the river is such that it held the contaminants up and they lingered around the intake. It eventually took a special release of water from Smith Lake to flush the bromide out of the pool and allow the intake to be restarted. The presentation labeled Exhibit H was given to ADEM concerning this matter.

The type of scenario described above can be experienced with mining-related contaminants, as well. Mining contamination is typically driven by rain events that wash sediment into the river and dissolve metal-laden minerals in the sediment. Contamination from rain events is positively related to the intensity of the event. An intense, localized rain event during a period when the river is at a low flow rate will create a scenario similar to that described above. A slug of sediment and metals will wash into the river in this area and persist in the pool, instead of being diluted by large river flows or being washed downstream. Of course, the risk from this type of event is greater for mines located in very close proximity to the intake, hence the designation in Exhibit C. There are multiple ways to quantify and mitigate the risk from

these types of events, but they are not in practice in the permitting and operation of surface mines.

First, you may quantify the risk of contamination by determining what contaminants are present in the soils and sediments in the area. You may also assess the likelihood that those contaminants will be mobilized during a rain event. Currently however, the permitting process does not require that the potential toxic materials in the overburden be assessed through leaching tests, so one must to rely on other literature to indicate what might be present. Studies by the United States Geological Survey (USGS) indicate that many potentially harmful metals are present in this coal field (Exhibits I, J and K). In fact, the metals are present in elevated levels and are directly associated with coal bearing minerals. In lieu of simple tests being performed during the application process for each mine, an independent study must be conducted before this risk can be fully understood.

Second, you may mitigate the risks of contamination through engineering, operation, and monitoring plans. Detailed engineering designs for treatment systems along with designs that meet industry best practices, would allow the mines to operate while significantly lowering the risk to water quality. Current mining permits are issued without engineering designs being submitted and with engineered systems that do not utilize the best technology currently available. Operational plans, based on actual sequencing and realistic efficiency assumptions, would document the measures needed to reduce contamination risk so that operators can be held accountable. And thoughtfully designed, event-based monitoring protocols focused on collecting useful data would provide the regulators with data needed to accurately assess the performance of a mine and inform future permitting decisions. Unfortunately, the plans commonly submitted with permit applications do not meet these standards.

Many of the conclusions and assumptions made in the permitting process are made based on the experience at other mines, as measured and recorded as part of the discharge monitoring report (DMR) system of the NPDES permit or as part of additional monitoring required by the ASMC. The problem with relying on this data is that the monitoring requirements are not designed to capture samples at the most important times. Mine ponds typically discharge only during rain events, but these monitoring programs do not require (and actually exempt) monitoring during these events. For example, an evaluation of the DMR data (6/2005 – 3/2012) from the Red Star Mine shows how little real information is provided from this type of monitoring. Of the 136 events during the period consisting of 1 inch of rain or more, only four of these events were sampled for a total of nine samples. There were ten storms during this period that could be classified as a 1-year 24 hour storm event or greater, including one 100-year event, and no samples were taken for any of those events. Data on the discharges from these events is critical to identifying contamination and verifying assumptions that are made in the permitting phase.

Without proper quantification and mitigation of risk, the BWWB remains exposed to adverse impacts to its operations from surface coal mining. Therefore, the BWWB must conclude that the designated area is unsuitable for mining activities.

V. PETITIONER'S INTEREST THAT IS ADVERSELY AFFECTED

The BWWB is an Alabama public corporation created pursuant to Ala. Code § 11-50-230, *et. seq.* (1975). The BWWB owns its Mulberry Intake and certain real estate associated with its intake that is along the Warrior River downstream from the area that this Intervention and Petition is seeking to have declared unsuitable for surface mining. As such, the BWWB is a riparian owner along the Warrior River. The BWWB withdraws water from the Warrior River

through its Mulberry Intake for the purpose, in part, of treating said water to make potable and for the sale and distribution to over 200,000 residents in central Alabama.

If the ASMC does not designate the areas covered by the proposed Shepherd Bend and Reed No. 5 mines as well as the Mulberry Fork public water supply drainage as “lands unsuitable for mining,” the BWWB’s use of the Mulberry Fork for drinking water will suffer and decline.

VI. CONCLUSION

The goal of the Intervention and Petition is to protect an important resource: clean, safe and affordable drinking water. The BWWB has invested substantially in the Mulberry Intake. The drinking water supplied by the Mulberry Fork of the Black Warrior River represents a unique, site-specific resource with a value clearly superior to that of coal in these circumstances.

Regulatory permit challenges, although critically important to ensure that permits are drafted to be properly protective of water quality, present a somewhat imperfect means to protect drinking water. The emphasis in those proceedings is whether the applicant meets minimal regulatory requirements for a permit, and they fail to effectively consider larger issues like cumulative effects or source drinking water protection. By contrast, the lands unsuitable for mining process is comprehensive and *preventative* in nature; it is specifically designed to protect valuable drinking water sources like the Mulberry Fork. The ASMC must now directly consider the effect coal mining will have on the source water quality of the Mulberry Fork. This segment is extraordinarily valuable to the Birmingham region, and the ASMC must determine whether, as this Intervention and Petition asserts, surface coal mining in close proximity to the Mulberry Intake harms and devalues the river as a drinking water source. As established by the Petition, the only logical and reasonable result is to designate as unsuitable for mining the areas covered

by the Shepherd Bend and Reed No. 5 mines, as well as the identified Source Water Protection Area of the Mulberry Fork public water supply.

Respectfully submitted,



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